

SHIPPING WORLD

AND SHIPBUILDING & MARINE ENGINEERING NEWS



VOL. CXXV No. 3037

WEDNESDAY, SEPTEMBER 12, 1951

Price 1/6



Built by Swan, Hunter & Wigham Richardson Ltd., for the Port Line, the *M.V. Port Brisbane* is now in service on the United Kingdom—Australia, New Zealand route.

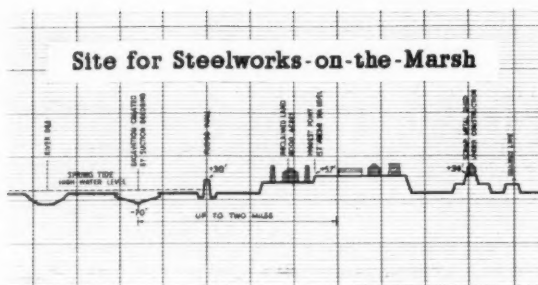
This ship is the first in the service to adopt the principle of streamlining. Features of its design include large electrically refrigerated holds for chilled and frozen cargoes, an all-electric galley for the crew, 16 electric winches and an electric deck crane. Current for the auxiliary machinery is provided by four 220 volts, 300 kW generators.

To give long trouble-free service under all maritime conditions, Ship Wiring Cables on this vessel were provided by BICC.



Ship Wiring Cables

BRITISH INSULATED CALLENDER'S CABLES LIMITED
NORFOLK HOUSE, NORFOLK STREET, LONDON, W.C.2



The new steel works for John Summers & Sons Ltd. will be built from 10' to 40' above marsh level. 4,500,000 cubic yards of this was reclaimed in six months. Pumping distance was up to 2 miles.

CONTRACTORS TO THE ADMIRALTY AND CROWN AGENTS

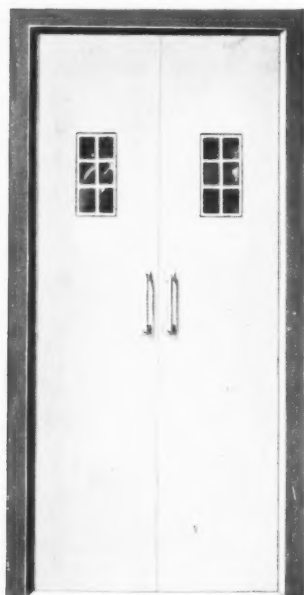
WESTMINSTER DREDGING COMPANY LIMITED

(E. D. KALIS - MANAGING DIRECTOR)

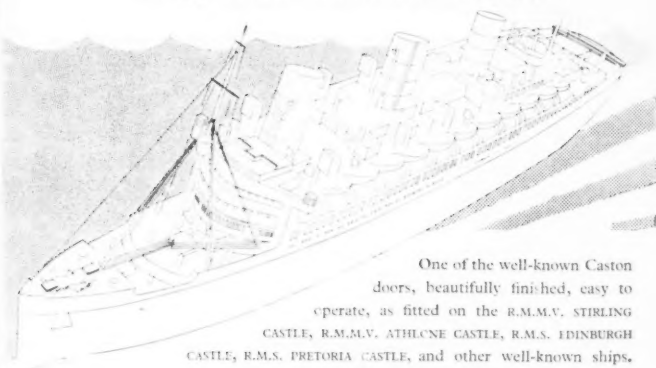
12-14 DARTMOUTH STREET, WESTMINSTER, LONDON, S.W.1. Telephone : Trafalgar 6835 6

- And at BROMBOROUGH, CHESHIRE. Rock Ferry 4255 & 4530

192-20



THE *Non-Slam* BI-PARTING DOOR FOR THE LUXURY LINER



One of the well-known Caston doors, beautifully finished, easy to operate, as fitted on the R.M.M.V. STIRLING CASTLE, R.M.M.V. ATHLONE CASTLE, R.M.S. EDINBURGH CASTLE, R.M.S. PRETORIA CASTLE, and other well-known ships.

ITS BALANCED SUSPENSION COUNTERBALANCES ROLL

MADE BY THE MAKERS OF **CASTODOR** PATENT MARINE DOORS

CASTON BARBER LTD. (Formerly Caston & Co. Ltd., Established 1847) 47 TABARD STREET, LONDON, S.E.1. TELEPHONE : HOPE 1991



REDERIAKTIEBOLAGET TRANSATLANTIC

The Rederiaktiebolaget Transatlantic was established in 1904 by the late Captain Wilhelm R. Lundgren with the object of establishing a regular service between Sweden and South Africa. By 1907, this Company had extended their sailings beyond the Cape to Australia.

Shortly after the first World War, Transatlantic founded a regular service — conjointly with the Swedish America Line—between Sweden and the United States. A subsequent development was the link between Scandinavia and Great Lake ports, also a joint effort. Later came an independent service between the Pacific coast of America and Australian ports.

In 1930, Transatlantic extended their South Africa/Sweden sailings to take in the west coast of Africa, this service being operated in conjunction with Det Bergenske Dampskibsselskab, of Norway. Their original South Africa and Australia sailings have been run for many years past in close co-operation with another Norwegian concern: Wilhelm Wilhelmsen, of Oslo.

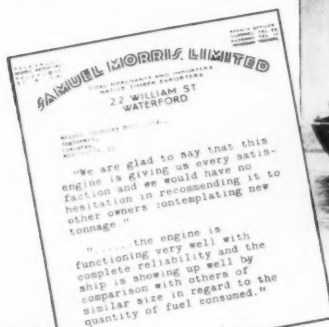
Most recent of the activities of Rederiaktiebolaget Transatlantic is their regular service between Far Eastern seaports and the Pacific coast of the U.S. and Canada.

Total ownings of this Company exceed 400,000 dead-weight tons.

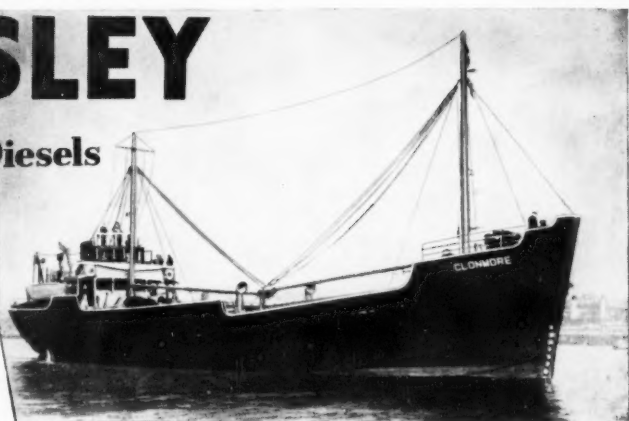


CROSSLEY

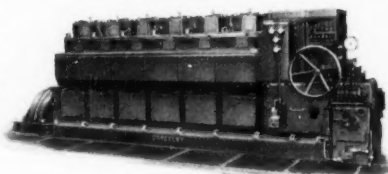
Direct Reversing
Scavenge Pump Diesels



**CROSSLEY BROTHERS LTD.
OPENSHAW, MANCHESTER 11**

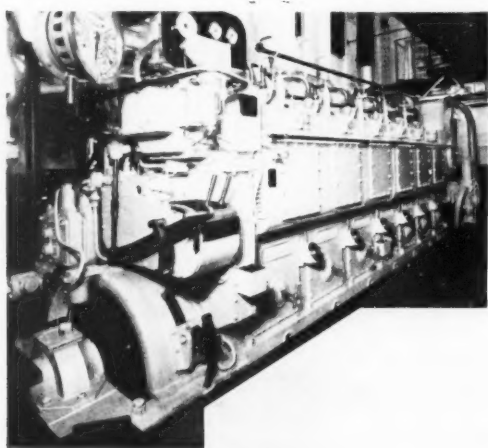


The motor coaster "Clonmore" is fitted with a Crossley 450 b.h.p. six-cylinder engine illustrated below and the extract from letter received from the owners of the vessel is typical of the service given by Crossley engines the world over.



London Office: Langham House, 308 Regent St., W.1.

C 333

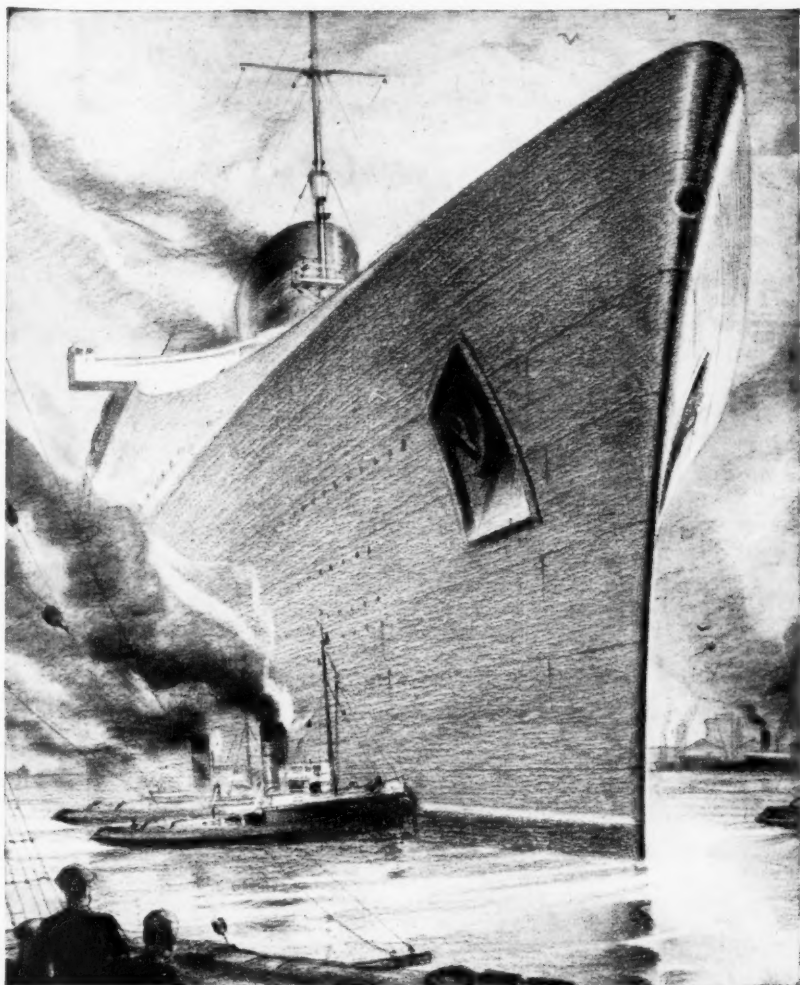


The twin-screw motor vessel "Balmoral," latest addition to the Red Funnel fleet, on the Southampton - Isle of Wight service. Above is one of the two 600 h.p. Sirron diesel engines installed, which give a maximum speed of 16 knots.

THORNYCROFT MOTOR VESSELS for coastal, estuary and river service

Full particulars from:
**JOHN I. THORNYCROFT & CO., LIMITED,
WOOLSTON WORKS • SOUTHAMPTON**





Down to the sea in ships . . .



More ships and yet more ships, and a great call for steel to build them. All our resources are turned to one purpose, to help each and every one of our customers to the best of our ability, treating every one with fairness in all matters connected with service and delivery.

APPLEBY-FRODINGHAM STEEL COMPANY, SCUNTHORPE, Lincs.

Telephone: Scunthorpe 3411 (9 lines) Branch of the United Steel Companies Limited Telegrams: "Appfrod" Scunthorpe

® AF 60

"Get me a seat on Sabena" 

 . . . that is the call of experienced air travellers, who know also that SABENA is the speediest and most satisfactory way of sending goods from London or Manchester to every important trading centre in the world.

Freight by Sabena saves packing and insurance costs, reduces risk of damage and pilferage, brings faster repeat orders, making for quicker turnover and greater profit.

Use Sabena passenger and FREIGHT Services to Europe, South Africa, Congo, U.S.A.

SEND FOR FREE LITERATURE

SABENA BELGIAN AIR LINES

Freight Collection Centre
 TERMINAL HOUSE, GROSVENOR Gdns., London, W.1. (SLOane 3439)
 or 32, DEANSGATE, MANCHESTER 3. (Dean:gate 6956)

Fast delivery without transshipment to 25 export destinations



Telephone Whitehall 3311
for immediate
quotation and booking

Clipper Cargo delivers your goods to destinations all over the world in a matter of hours. And to 25 important centres, including New York, Boston, Rio de Janeiro, Buenos Aires, Stockholm, Calcutta, there is no transshipment.

Telephone WHITEhall 3311 for immediate quotations and cargo space reservations, and information regarding special commodity rates.

Guaranteed space · Lower Insurance rates · Van Pickup service in London · Transferred charges and C.O.D. available to many destinations.

NEW YORK	18½ hours	COLOGNE —	
RIO	29½ hours	DUSSELDORF	1½ hours
BUENOS AIRES	36 hours	DAKAR	14½ hours
CALCUTTA	45 hours	COPENHAGEN	3½ hours
KARACHI	36 hours	STOCKHOLM	5½ hours
BANGKOK	51 hours	MUNICH	4½ hours
BEIRUT	14½ hours	HAMBURG	2 hours
ISTANBUL	9½ hours	BASRA	29½ hours
DELHI	40½ hours	LISBON	6½ hours
RECIFE	23 hours	PARIS	1½ hours
FRANKFURT	2 hours	BRUSSELS	1½ hours
BOSTON	17½ hours	GANDER	12½ hours
		SHANNON	1½ hours

World's largest and fastest air cargo service

PAN AMERICAN WORLD AIRWAYS WORLD'S MOST EXPERIENCED AIRLINE



AIRSPED AMBASSADOR — 2 Centaurus Engines

Bristol
**engined
aircraft**



BREDA-ZAPPATA 308 — 4 Centaurus Engines

In 30 years "Bristol" piston engines have built up a tradition of reliability and efficiency, which is being worthily upheld by sleeve-valve engines in world-wide service today. Concurrently with continued development of the Hercules and Centaurus, experience is being gained, on the test bench and in service, with a range of gas turbines which will sustain and enhance the high reputation of "Bristol" aero engines.



SHORT SOLENT — 4 Hercules Engines

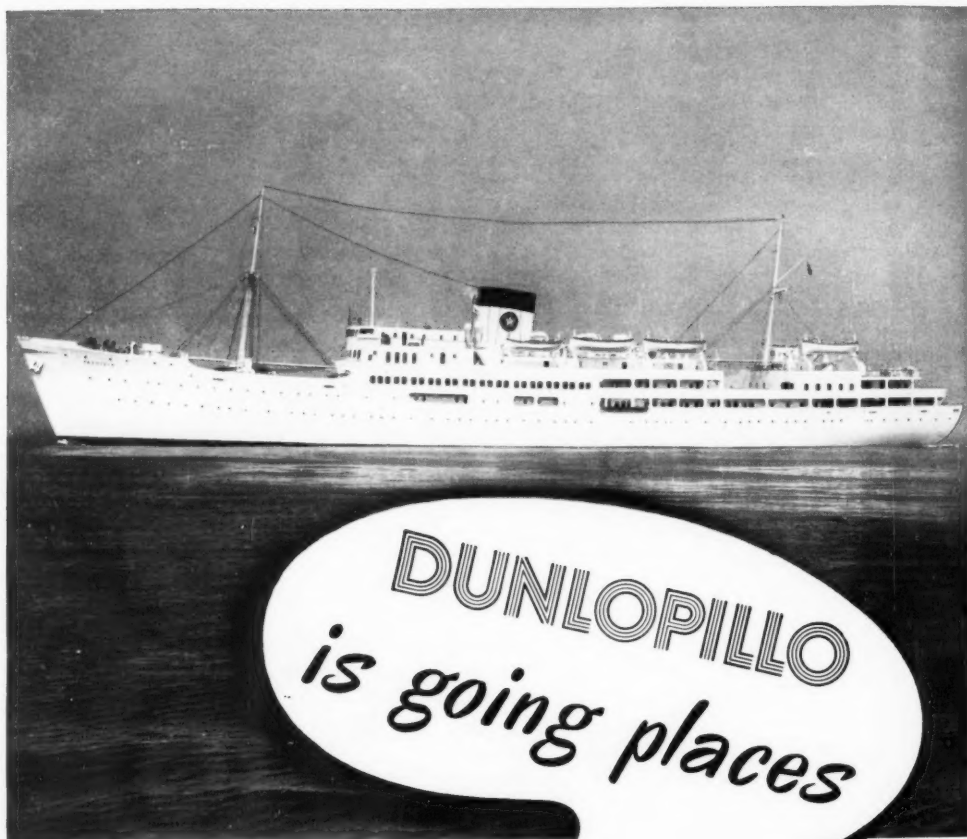


VICKERS VIKING — 2 Hercules Engines



HANDLEY PAGE HERMES 5 — 4 Theseus Propeller Turbines

THE *Bristol* AEROPLANE COMPANY LIMITED · ENGLAND



—in T.S. Patricia, Newest and Largest

Passenger Ship on the North Sea Routes

Long a favourite ashore, and already installed by many famous shipping lines, Dunlopillo is certainly "going places" in shipping today. To Sweden, for instance, in Swedish Lloyd's new passenger liner T.S. Patricia, the largest on the North Sea Routes. Built by Swan, Hunter and Wigham Richardson Ltd., the 7,700 ton

"Patricia" will carry many passengers between Tilbury and Gothenburg many of whom will sleep in great comfort on the world's most luxurious mattress—the Dunlopillo "Deep-Six". And not only passengers will be supremely comfortable. There are Dunlopillo mattresses in the ship's officers' quarters, too.

THERE'S NOTHING AS GOOD AS

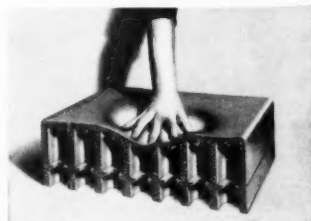
DUNLOPILLO

made by Dunlop

DUNLOP RUBBER CO. LTD. (DUNLOPILLO DIVISION), RICE LANE, WALTON, LIVERPOOL 9.
LONDON: 19-20 NEW BOND STREET, W.1

FOUNDERS OF THE LATEX FOAM INDUSTRY

(D 51)



The SHIPPING WORLD

AND SHIPBUILDING & MARINE ENGINEERING NEWS

The Oldest Weekly Journal devoted to Shipping, Shipbuilding,
Marine Engineering, Shiprepairing, Insurance and Finance

FOUNDED



1883

Chairman and Managing Director of The Shipping World, Ltd. :—SIR ARCHIBALD HURD

Editor :—PETER DUFF

Managing Editor :—RONALD KENDALL, M.C.M.S., A.M.I.N.A.

Advertisement Manager :—M. B. FIELD

Annual Subscription 70s.

Head Offices : 1, Arundel Street, London, W.C.2. (Temple Bar 2523)

Telegrams : "Shipping World," London

Northern District Manager : W. S. Wilson, M.I.E.E., 27 Exchange

Buildings, Newcastle-on-Tyne. Telephone : Newcastle 27078

Vol. CXXV.

WEDNESDAY, SEPTEMBER 12, 1951

No. 3037

Sixty Years of Shipping Progress	169	Reduced Airline Rates	179
Current Events	169	The Cargo Liner <i>Benny Skou</i>	180
On the "Baltic"	172	Engineering, Marine & Welding Exhibition	182
Furness, Withy & Co., Ltd.	173	Round the Shipyards	183
Coal & Oil	176	Installing the <i>Auris</i> Gas Turbine	183
Official Notices	176	Pictures	184
The Air Registration Board	177	New Contracts, Launches, Trial Trips	185
Air Cargo in the Antipodes	178	Maritime News in Brief	186



**Non-ferrous
tubes
for shipping**

CONDENSER TUBES in cupro-nickel, aluminium brass, Admiralty-brass and other alloys.

COPPER TUBES for steam, water, domestic and other marine applications.

Made to British Standard, Admiralty and A.I.D. Specifications.

SCOTTISH NON-FERROUS TUBE INDUSTRIES LIMITED

Sales Office: 4, Blythwood Sq., Glasgow, C.2. Tel: Douglas 7020 Works: Hillington, Glasgow, S.W.2

"The Price of Peace . . ."

Mr. H. T. N. Gaitskell, Chancellor of the Exchequer, introducing his 1951 Budget

BUDGET COMPARISONS

MOTOR TAXATION REVENUE

	1914	1939	1951
MOTOR TAX . .	£1,090,000	£37,239,907	£62,000,000
FUEL TAX . .	£841,000	£56,368,093	£193,000,000

EXPENDITURE ON ROADS

EXCHEQUER GRANTS from Road Fund	£18,800,000	£20,232,000	£29,511,000
EXPENDITURE BY Local Authorities		£41,117,000	£45,000,000

In the current year, nearly £200,000,000 raised from Motor Taxation will be devoted to general expenditure.

TO PROVIDE PROPULSION AND AUXILIARY POWER
UNITS THAT CHALLENGE ANY COMPARISON

WRITE :

R. A. LISTER (MARINE SALES) LTD.
DURSLEY, GLOUCESTERSHIRE.



THE SHIPPING WORLD

SIXTY YEARS OF SHIPPING PROGRESS

IF it were sufficient merely to draw attention to the truly great achievements of the Furness, Withy group of companies since the parent company became a public one in 1891, a great deal might be said which would provide reason for congratulation in this country. Unfortunately, one must be more realistic in these grim times, and think not only of the great days behind but whether there will be any great days in the future. The eight associated companies which are consolidated in the group are sound, well managed, and have the ships and men required to provide world-wide service and could, other things being equal, continue their expansion with very considerable benefit to all in this country. One must not forget, however, that there are two anniversaries to be commemorated; it is true there have been sixty years of progress by Furness, Withy, but it is also plain fact that there have been six years of Socialism. The latter force is only one-tenth as old as the former, but progress is a good deal more than ten times harder than retrogression.

The statement of the chairman of Furness, Withy & Co., Ltd., Sir Ernest H. Murrant, makes it abundantly clear where the dangers lie. The group has a liability of £3,500,000 per annum made necessary if they are to build ships to replace those growing older, even at present costs of construction. Under the present scale of taxation and with existing methods of assessment, Sir Ernest has said that there must be a gradual decline in the ability to maintain the present volume of tonnage owned by the company. In other words, six years of socialism have checked the progressive trend of sixty years of enterprise. The relationship is one which might well be studied by industrialists generally.

The problems enumerated by the chairman are all too well known. They have arisen by a breach of faith on the part of the Government, which encouraged companies voluntarily to restrict distributed profits, while allowing wage demands to go relatively unchecked. The Furness, Withy group provides an excellent example of what has happened. In 1948 the company, at the behest of the Government, put a

ceiling on the ordinary stock dividend distribution for one year in the hope that recurring demands for increased wages would be arrested. These hopes were not fulfilled. And it has not only been wages which have increased; the Government itself, while urging others to save, has had, as Sir Ernest has said, a mania for spending. Despite the fact that others had broken faith with the idea of voluntarily checking inflation, the Furness, Withy company has continued its self-imposed restrictions since 1948, and it is interesting now to consider what has been its reward. This has consisted of a further addition of 20 per cent tax upon distributed profits, an increase of another 6d. in the rate of income tax, the withdrawal of the system of initial allowances for ships contracted for since the last Budget, and more recently, an announcement that dividends would be restricted by legislation. The Government could not make more plain the fact that they have not the slightest interest in the effect of the rising cost of living upon the 12,000 ordinary shareholders who, with their predecessors, have enabled this shipping group to become known throughout the world for their shipping services.

It is ironic to think that while American recognition has been freely given by the award of the 1951 Gold Medal of the American Academy of Design to the *Ocean Monarch* for originality of design and beauty of decoration—a signal and unique honour for a British ship—the Government's policy towards this and other British shipping companies is making it impossible to maintain the fleets in future years. It may be truly said that not only a profit, but anything profitable, is without honour in its own country. It is to be hoped that those who are at the moment examining the incidence and methods of levying taxation will take to heart the lucid and simple statement recently issued by the General Council of British Shipping on this subject. To the reasonable man it would seem logical, let alone beneficial to any government, to allow shipowners to retain at least sufficient of their own earnings to keep their fleets in existence. Bringing the individual shipowner to penury may be good socialistic fun; removing him from his position and his ships from the seas by taxation is stark lunacy.

Current Events

The Winter's Troubles

THE COMING winter will be a trying time for all the industries of this country—not, of course, excluding those concerned with the building and equipping of ships. Steel and other materials will be in short supply owing, in large measure, to the follies of bulk buying and nationalisation which goes on its inefficient way, incurring increasing losses. The conditions on the railways will be worse than at any time in living memory, and delays in the supply of everything needed in the

shipyards and engine shops and, indeed, in all factories and workshops are inevitable, another illustration of the failure of nationalisation, for the workers are, as Lord Ammon remarked recently, not showing the spirit in doing their jobs which the architects of the Welfare State expected. Their main concern, as the proceedings at the T.U.C. Conference has shown, is for bigger pay packets, which means that as everything in the shops is in short supply, prices will inevitably rise. The Government will no doubt try to placate their followers

by further interference in industry, possibly by a capital levy, and may try to limit profits. The Chancellor of the Exchequer has warned them that higher wages mean higher prices and that the further taxation of profits, even on a drastic scale, would not mean more than a few pence added to the average wage each week. There is every sign of the development of another economic crisis in the next few months, owing to the shortage of materials of all kinds, the scarcity of craftsmen in many industries, and the scale on which Government expenditure is being maintained. The country is living beyond its means, with the result that the gap in the national trading account is widening, and any wage increases which may be conceded will hasten that movement.

Rising Prices

SHIPBUILDERS are more and more embarrassed by the course of events. Though their order books are well filled, they wonder what will happen when the present boom is over. As Major Jackson Miller, chairman of the Fairfield Shipbuilding & Engineering Co., Ltd., remarked at the launch of the ore-carrier *Bomi Hills*, it is difficult for them to see and plan in these very trying times, when prices are rising month by month. He referred specifically to the six ships which his firm is building for the Liberian Navigation Corporation, of which the *Bomi Hills* is the first. "Since the order for the six ships was placed, in fact in the last month, the additional cost for steel alone has exceeded £250,000. If that goes on it is difficult to prophesy the result. There must be some limit to which costs may attain and I fear they are getting very near to that limit." Sir George Barr remarked that when the inquiry was first received, in October 1949, the position of the shipbuilding industry had been giving cause for very serious concern. There were practically no inquiries, and prospects looked very grim. Since then there has been a radical change. It is true that the present outlook of the industry is good, but shipbuilders have to plan well ahead in order to provide anything like full employment for their plant and workers and, at present, the future is overshadowed by extravagant wage claims and difficulties of supply which exceed anything known in the past, when industrial leaders were free to manage their affairs without interference.

A Hard Case

SHAREHOLDERS of the Aviation & Shipping Co., Ltd., are exceptionally hard hit by the Government's White Paper dividend control proposals. In 1948 a dividend of 50 per cent was paid on the small one-class capital of £180,000. In 1949 the distribution was 35 per cent, but in 1950, the group having suffered a trading loss of £91,000 in the twelve months to end-June of that year, no dividend was paid. This means that the provisional ceiling dividend under the White Paper provisions is one of 17½ per cent only: it is based on the average payments for 1948/49 and 1949/50. It had clearly, however, been the directors' intention to distribute something in excess of that rate, since an interim dividend of 10 per cent was declared for 1950/51 in November last. The directors have therefore recommended payment of a dividend of 17½ per cent for that year but, in addition, have reserved a further 7½ per cent. It is proposed eventually to approach the Treasury for permission to make this additional payment as a special case, having regard to the extraordinary circumstances covering the trading of the company in 1950. Trading profits of the year under review totalled £80,000, and the net figure was £43,000 after tax, depreciation and other charges. The 17½ per cent dividend to be paid costs £17,000, while the reserve for the extra 7½ per cent takes £7,000. A full payment of 25 per cent would thus have been justified by the year's earnings. Reserves now total £177,000, and the fleet is conservatively valued at £618,000, which sum represents no more than £15 per deadweight ton. Its

average age, at 9 years, is low. The board intends to conserve resources and not to contract for new tonnage until it is again possible to acquire modern vessels at an economical price.

U.S.A. Ship Sales

THE United States has done well out of its ship sales owing to a number of favourable circumstances, and more particularly the shortage of tonnage after six years of war. According to the latest official figures, 1,956 vessels have been sold, and the proceeds have amounted to £612,394,000, no mean sum, though, of course, far less than they cost to build. The American taxpayers would have been well pleased if other "remainders" at the close of hostilities had yielded anything like as much in comparison with the original expenditure on them. American operators were the largest purchasers, relieving the Government of no fewer than 843 vessels, while 34 other nations acquired the rest. It is not surprising that British owners, who had suffered such heavy losses at the hands of the enemy, 11,500,000 tons gross, should have purchased more than any other foreign nation, no fewer than 218 vessels—more than half of them of the Liberty class—at the total price of just under £68,000,000. Again, it is not surprising that Panama, which has taken her place high up among the maritime nations, was an eager buyer and took over 132 of these ships in the reserve fleet. Italy, which was badly off for tonnage as a result of her costly flirtation with Hitlerism, was glad to take over 123 ships, 95 of them Liberties, and then came Norway, which added 120 to her also sadly diminished fleet. How long will these ships, from what may be called the American war production line, be able to hold their own in competition with postwar vessels?

Argentina's Difficulties

WHAT IS going to happen in Argentina? Shipowners, and not only British shipowners, would like to know the answer to that question so that they can make their plans as they used to do in pre-Peron times. According to a correspondent of the *Financial Times*, matters seem to be approaching a crisis in the republic. He suggests that preparations for the Presidential elections in November have served to divert attention from the country's growing basic economic problem. This is the decline of primary production, particularly of the traditional crops such as wheat, maize and linseed, as a result of the Peronista Government's export trading monopoly and its short-sighted policy of industrialisation and exploitation of the power of the workers through control of the General Confederation of Labour. "That the Government is aware that this swing away from agriculture to industry has gone too far is seen in the various incentives it has recently offered to farmers, such as higher official prices for crops and shares in the State's profits from corn export trading." In his opinion the Government's purpose is being defeated by the increasing pressure of inflation on the farmers' costs, and the consequent narrowing of an already small profit margin. He states that "official figures of the 1950/51 harvest out-turn are not available, but it may be reckoned that production in the three principal export grains—wheat, maize and linseed—barely reached an aggregate of 10 million short tons, as compared with the prewar figure of over 16 million and with the wartime five-year average of 14.3 million tons. As to the meat position, this correspondent states that the action of the Argentine Government a month ago in ordering a reduction of slaughterings with a view to scaling down frozen beef exports to 10,500 short tons a month indicated the existence of unprecedented difficulties. "The subsequent decision suspending meat exports entirely for the time being in order to safeguard the domestic meat supply has lent further emphasis to the crisis affecting the meat export trade."

Naval Architects in America

AS THE summer meetings of the American Society of Naval Architects and Marine Engineers last week immediately preceded the Sixth International Conference of Ship Tank Superintendents, it was to be expected that the papers read at the meetings would be concerned with ship resistance and propulsion. All nine papers, in fact, dealt with these subjects, though that read by Dr. S. Livingstone Smith, of the British Ship-building Research Association, dealt with the whole field of research into naval architecture and marine engineering in this country while Dr. Telfer's paper discussed economic speeds. Britain was well represented at these meetings as, in addition to Dr. Smith's paper, others were read by Mr. R. W. L. Gawn, of the Admiralty Experiment Works, and Dr. J. F. Allan and Dr. George Hughes, both of the National Physical Laboratory. In addition, British naval architects are represented by Dr. E. V. Telfer, now head of the Marine Department of the Technical University in Istanbul, and Dr. F. H. Todd, who was educated and trained in Britain though he now occupies the position of Chief Naval Architect at the David Taylor Tank of the United States Navy Department. There were two French papers, one by Dr. Rene Guilloton, and the other by Captain R. Brard. The remaining papers were given by Professor J. K. Lund, of the Norwegian Tank, and three authors from the Experimental Tank of the Stevens Institute of Technology at Hoboken, New Jersey. The aspects of the main subject which were dealt with in the papers included wave resistance, self-propulsion tests, propeller cavitation tests, turbulence stimulation, effects of surface roughness, and manoeuvring. Following the meetings on September 6 and 7, a week of technical sessions of the International Conference is now being held. At these meetings, reports of the international committees on propellers, skin friction, and cavitation tests are being considered, while further reports on turbulence stimulation, scale effect on self propulsion factors, seagoing qualities and presentation of data will be presented.

Economic Speed Trends

THE ECONOMIC speed, as defined by Dr. Telfer in his paper read before the American Society of Naval Architects and Marine Engineers, was that speed which allowed the sea voyage from port to port to be accomplished with the minimum financial outlay, so that neither freight rate nor time in port had any direct influence on the problem. The author gave a series of formulae which set out the relationship, known as the fuel line, in terms of fuel consumption and brake horsepower, and then evolved an expression for economic speed giving that speed which necessitated the minimum bunkers for the voyage. In dealing with the cost factor, the analysis showed clearly that the economic speed chosen depended upon the relationship between wages and fuel costs in the countries concerned. Dr. Telfer pointed out that as wages were high and fuel relatively cheap in the United States of America, the economic speed of American ships should be higher than those of many other countries, a fact which perhaps had been recognised in the new 22-knot cargo ships built in the United States. The author was of the opinion that as previous work on economic speeds had ignored the two fundamental factors, initial fuel and weather loss, there had been a tendency to assign speeds which were in fact too low to be economic. The author referred to the problem of designing ships for wartime service, stating that convoy working was a most uneconomic method as the power averaged under adverse weather conditions was usually much below normal, the speeds were proportionally low, and wages and expenses disproportionately high. It was pointed out that the wages and expenses were not only those of the ships being convoyed, but of the convoying and other warships. Dr. Telfer said that it would appear that all economic speed trends must necessarily be upward, though in fact "soft" economies had made

the research into slowing down ships an avenue which might solve a very real problem in many ports in the world.

A "Due Diligence" Case

THE CASE of the *Ocean Liberty* recently decided in the United States District Court of Maryland, while only creating a precedent in American law, nevertheless has importance to shipowners, marine underwriters and the P. & I. Clubs. Briefly, the circumstances were that the *Ocean Liberty*, having loaded ammonium nitrate in her lower holds at Baltimore and general cargo in other compartments at Baltimore and New York, sailed for Antwerp, Cherbourg, Havre and Boulogne in July 1947. When off the Bishop, she was diverted to Brest by orders from the sub-charterer in agreement with a French Government organisation known as "Impex," the reason for the diversion being that a strike of stevedores had immobilised the port of Antwerp. While in dock at Brest, a fire was discovered in No. 3 hold in which ammonium nitrate was stowed. The outbreak could not be controlled and while the vessel was being towed out of port she stranded on a sandbank and eventually exploded, ship and cargo being totally destroyed. The issue in Court was whether the carrier was liable either by reason of failure to deliver cargo in good order or because of unjustified deviation.

Carrier Held Liable

ON THE first count, the Court held the carrier liable because he had failed to exercise due diligence to provide a seaworthy ship, and this despite the fact that when loading at Baltimore supervision had been exercised by the local Fire Department, the Coast-guard and the representative of the New York Board of Underwriters. This is a greatly simplified presentation of the outcome of the case, which was argued over many subtle points, among them the question of whether the American Fire Statute, exempting the owner of a ship from liability for damage by fire, protected a sub-charterer who was not the owner. The Court held that the Statute did not protect the sub-charterer and the case turned on the "due diligence" clause of the American Carriage of Goods by Sea Act, based on the Hague Rules. It was admitted that the customary precautions had been carried out while the vessel was loading, but this, apparently was not enough. The *Texas City* disaster of some two months earlier should have informed the carrier that particular precautions were necessary in the carriage of ammonium nitrate and, in particular, that an extraordinary amount of ventilation was necessary. The carrier could not shift his responsibility by relying upon the ignorance of others; he should have made special inquiries as to the requirement of the shipment. The carrier was liable, and this being so the question of deviation, though argued at length, lost its importance and it is sufficient to say that the Court held that the deviation was reasonable.

SAYINGS OF THE WEEK

HIGHER COSTS OF REPAIRS

"The cost of repairs shows no sign of decreasing. On the contrary, there is every indication that the increases which have become apparent during the post-war period have not as yet reached their peak. Furthermore, the effect of the rearmament programme will undoubtedly cause delay in the carrying out of repairs."—Mr. Arthur D. Bradford, chairman of the Minster Insurance Co., Ltd.

THE GOLDEN FLEECE

"There must be a gradual decline in our ability even to maintain the present volume of tonnage if taxation and methods of assessment continue on the present level and basis. It is therefore to be hoped that the Royal Commission on the Taxation of Profits and Income will bear in mind that whilst it is practicable to shear a sheep once a year, skinning it has dire consequences."—Sir Ernest H. Murrant, chairman of Furness, Withy & Co., Ltd.

ON THE "BALTIC"

PROSPECTS FOR GRAIN CARGOES

By BALTRADER

It was hoped earlier in the year that we might see some revival in the Plate market during the summer, when maize was expected to be available and in condition for shipment. These hopes have been disappointed, as there seems to be little maize to spare for export from that country. In 1950 nothing was expected of the Argentine in the way of an active movement of maize, because the crop was ruined by drought. Tramp ship owners, however, begin to wonder whether the homeward Plate has permanently ceased to be a really important factor in their business. Great efforts are certainly being made by the Government to transform the Argentine into an industrial country, consuming more and more of its own food production and developing whatever resources of fuel and ore can be found within its frontiers. Fixtures for grain from Australia are comparatively few and not expected to multiply to any great extent before the turn of the year. North America, therefore, is the main hope of owners who look for cargoes of grain in bulk during the remainder of 1951. Canada has the expectation of an unusually large surplus of grain for export, and the U.S.A. should have four million tons for export between October and December inclusive, according to the American Department of Agriculture.

The North Pacific market has lately absorbed quite a number of vessels for lumber and general cargo shipments as well as for some cargoes of grain for Europe and India. The improvement in demand from that side of the Pacific has been welcome to owners who could find no good employment for their vessels in Australia. Ships are apt to accumulate at Australian ports as they complete their discharge of motor cars, general cargo, coal, etc. That traffic now goes on continuously, and does not fluctuate seasonally as in the case of the Australian major exports, grain, wool and sugar. At the present time our motor manufacturers are inconvenienced by the shortage of shipping to carry their exports to Australia, while the grain charterers at the other end have more vessels on their lists than they require. When Australia is temporarily short of outward cargo it is a long pull in ballast that is required to reach an alternative market. In such a case, the diesel vessel of good but not excessive speed and economical consumption of compact fuel, shipped at the cheapest available bunker stations, has great advantage over any other type. It has that quality which is lacking both in the war type tramp and the latest cargo liner. The economical diesel vessel can turn up where most wanted at reasonable cost to the owner, even after a long run with empty holds.

South African Delays

South Africa is slow in recovering from its inland transport difficulties which led to the cancellation of so many coal charters. Delays through congestion at the principal ports are also still frequent in the case of vessels discharging general cargo. The vessels taking much needed phosphate to South Africa will no doubt have priority in loading coal outwards from there; last week, however, saw business done for coal to Karachi for September, albeit at a low rate. Inquiry also sprang up for other destinations. Importers in the Indian Ocean, Northern Europe and Red Sea will be glad to have supplies from South Africa at the earliest possible moment. So will West Africa, which is at present particularly handicapped by coal shortage. This is affecting the general economy of that region, as is shown by the unusual inactivity of the market for West African time charter rounds.

The minds of charterers in the North China trade have been exercised by the issue of the decree by the

Panamanian Government forbidding the dispatch of vessels of that flag with cargo destined for Communist countries. The ban also appears to have been applied to some vessels which had been chartered to load in the North China area. If Panamanian vessels are no longer available for loading there, it may affect the North China trade, much of which has been dealt with in Panamanian ships. No hardening of freights from North China has been observed, but inquiry has lately been on a comparatively small scale. The supply of tonnage of other flags than Panamanian has been quite sufficient to meet charterers' requirements; some interruption of chartering has been occasioned by floods.

Looking at the markets all round, including the big movements of coal, timber and grain in progress or pending and the continuous demands of the liner companies for the service of tramp ships, one cannot expect anything but rates at a high level. To prophesy is too dangerous, but one can, at least, point to the view obviously taken by some of the leading and most experienced charterers. They are taking ships on time charter for 12 months or longer at rates of hire which last year would have been considered fantastic.

The Freight Markets

Chartering of coal cargoes from the United States has been on a smaller scale than for some time, but inquiry has increased in the past few days. The *Leontos* is fixed from Hampton Roads to Antwerp-Hamburg Range at \$11.20, September. Two vessels were taken from Northern Range to Antwerp-Hamburg Range at \$10.50 Holland or Belgium, or \$10.95 Germany, on Warshipvoy charter, free discharge, September. Many destinations are represented in recent coal fixtures from Hampton Roads, e.g., West Italy at \$13, September, Rio de Janeiro at \$16.50, September, Buenos Aires at \$18.50, September/October, and Japan at \$19.35, October. The *Blue Master*, 9,200 tons, is chartered for heavy grain at \$19, St. Lawrence to Rio de Janeiro, October. There are a number of orders for grain from the St. Lawrence or from the Gulf of Mexico to Europe, including the United Kingdom and Eire. Chartering from the North Pacific has continued on a good scale: October and November ships have been chartered from North Pacific to Japan at \$13.25, wheat, option barley at \$14. The *Westralia* is fixed North Pacific to Eire, 8,200 tons, 155s., heavy grain, November. *Atlantic Wind*, 10,000 tons, is fixed North Pacific to the United Kingdom at \$23 f.i.o., lumber and generals, September/October. A concession is understood to be a fixed rate of discharge which, in view of the abnormal delays in this country, is of importance. There are signs of resumption in the chartering of South African coal. A Japanese vessel accepted the low rate of 60s., Durban to Karachi, September, and another vessel, 8,500 tons, again a Japanese, was chartered last week from Durban to Port Sudan at 65s., September. Ships have been chartered for sugar from Mauritius to the U.K. at 102s. 6d., November loading. Inquiry in the Far East is small. Time charter demand is well maintained. *Culross*, 10,081 tons d.w., 462,000 ft. bale, 10 knots on 28 tons oil, is fixed for a trip out from E.C. U.K. to New Zealand at 56s. 9d. per ton per month, October 1/20.

The following have been elected members of the Baltic Exchange:—

J. W. L. Drye (McNabb Rouzier & Co.), E. E. Martin (Delmege Allen & Co., Ltd.), P. J. Hadoulis (J. P. Radoulis, Ltd.), M. M. Xylas (Faro Shipping Co., Ltd.), L. Sinclair (Esso Petroleum Co., Ltd.), G. F. Johnson (Howard Tenens, Ltd.), B. C. Smith (Balfour Williamson Merchant Shippers, Ltd.), L. F. Sarry (E. H. Muniv & Co., Ltd.), M. T. Lenos (Cheriton Shipping Co., Ltd.), F. W. A. Carpenter (F. W. Bellers & Co.) and G. D. Leinster (Leinster & Co., Ltd.).

FURNESS, WITHY & CO., LTD.

PROBLEM OF FLEET REPLACEMENT : SIR ERNEST H.
MURRANT'S VIEWS

THE SIXTIETH annual general meeting of Furness, Withy & Co., Ltd., will be held on September 28 at Furness House, Leadenhall Street, London, E.C.

The following is the statement by Sir Ernest H. Murrant, K.C.M.G., M.B.E. (the chairman), which has been circulated with the annual report and accounts for the year ended April 30, 1951.

As stockholders are aware, we have reached a landmark in the history of the company, this being the sixtieth year since incorporation as a public company. The record has been one of continuous expansion and today we are able to present accounts which reveal the results of a long period of careful husbandry and enterprise. The $2\frac{1}{2}$ per cent dividend (not subject to tax) distributed to stockholders in March last will no doubt have been a welcome reminder of this special anniversary.

This is the fifth occasion on which we present consolidated accounts of the group, and as the chairman of another company has stated, it becomes a kind of relay race to coordinate the accounts of the many companies comprising the group in time to submit consolidated figures within four months of the close of the company's financial year on April 30. Inasmuch as the results of operations in practically every maritime part of the world are involved, it will be appreciated that the task of our accounting staffs is an exceptionally heavy one.

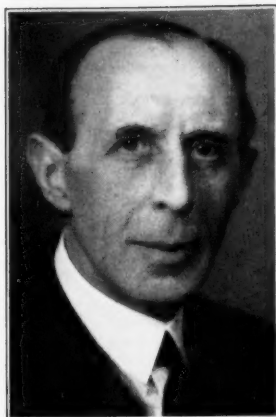
Taxation Equalisation Account

In the parent company's balance sheet the only item on the liability side that calls for special comment is the taxation equalisation account, £984,724. I commented last year on the reserve which appeared in the consolidated balance sheet, and it has been considered desirable to establish a similar specific reserve in the parent company's accounts in order to provide cover for the ultimate taxation liability on the initial wear and tear allowances we have received. The figure of £984,724 is substantial, and has been established in part by transferring to this account amounts attributable to initial allowances in past years plus an appropriation from the current year's profits.

The statement by the Chancellor of the Exchequer in his Budget speech that it was intended to withdraw the initial allowances was a severe shock to the shipping industry, as it was felt to be an unfair handicap in respect of shipbuilding contracts already entered into in good faith for deliveries which may extend well into 1954, or even beyond that date. Fortunately the Chancellor received the industry's immediate representations with considerable understanding and sympathy, with the result that amendments were accepted which will permit the application of these allowances to shipbuilding contracts placed before the date of the Budget statement. This concession will be of assistance in financing new tonnage already ordered, but its withdrawal will make future building for replacement more difficult while high construction costs and penal taxation continue.

Fleet Changes

In the parent company's books the fleet now stands at £3,400,813, compared with £2,639,266 in 1950. The increase is only some £750,000, but there have been material changes in the course of the year. We have completed payment for the passenger ship *Ocean Monarch* (payments on account of which ship have figured in each of the two previous years' accounts);



Sir Ernest H. Murrant,
K.C.M.G., M.B.E.,
chairman of Furness,
Withy & Co., Ltd.

we have acquired the *Pacific Fortune*, and have made payments to builders on account of the cost of *Pacific Reliance*, which we hope will be delivered towards the end of this year. On the other hand one ship has been disposed of to shipbreakers. The customary provision for depreciation has been made out of the current year's earnings before arriving at the present net book value of the fleet.

The U.S.S. *Ocean Monarch* was delivered by the builders at the end of March last. The company was honoured by a large number of distinguished guests on board during a short inaugural cruise in the English Channel, and on the vessel's arrival in New York to commence her maiden voyage on May 3, the company was further honoured by being awarded the 1951 Gold Medal of the American Academy of Design for originality of design and beauty of decoration—a very handsome recognition of British craftsmanship.

It will be appreciated that this vessel has not contributed anything to the past year's trading results, but she has already established her popularity with the United States travelling public for vocational cruising.

Our friends in Bermuda gave the ship a very warm welcome both on the maiden call at Hamilton and on the subsequent voyage to St. Georges. A formal address of welcome, delivered personally by the Mayor of Hamilton, described the "arrival of this new and beautiful ship" as "the beginning of another chapter in the annals of Bermuda's maritime history." The Bermuda Trade Development Board also gave very practical demonstrations of their goodwill and pleasure with this addition to their tourist transportation facilities.

The consolidated balance sheet needs little elaboration. Within the group the taxation equalisation account has been increased from £2,061,940 to £3,489,506, in circumstances already explained.

New Tonnage

The combined fleet account stands at the increased figure of £19,821,940, which includes payments on account of ships under construction amounting to £1,191,822. In the course of the year six new ships have been brought into commission, being in part additions to the combined fleets and in part replacements of three ships withdrawn from service. For the purpose of writing down at once part of the excessive initial cost of this new tonnage, a transfer has been made from the fleet replacement account.

From Note III on the consolidated balance sheet it will be observed that, notwithstanding the substantial payments already made on account of new tonnage, the liability in respect of uncompleted shipbuilding contracts at April 30 was £5,106,177—approximately

£810,000 in excess of the corresponding figure a year ago. Eight ships are either under construction or on order; some will not come into commission until well into 1954 and it is inevitable that in the interval other new ships will need to be ordered if the group fleet is to be maintained. Being well aware of the revolving necessity to build for replacement alone, your directors are deeply perturbed at the continuing increase in the cost of construction and the very long period which elapses between ordering and obtaining delivery of new tonnage, and as things stand today it is not true to say that because we are building faster, better and more expensive ships, we can make two do the work of three. On the contrary, in the majority of our long distance trades, the voyages are taking longer time, notwithstanding faster speed at sea and improved cargo handling facilities.

Losses Caused by Industrial Disputes

It is perhaps appropriate at this point to mention that our records show that in the past financial year ships of the combined fleet have been idle for no fewer than 1,299 ship-days in various parts of the world through industrial disputes or kindred occurrences. These delays have involved actual out-of-pocket expenses amounting to £395,000, apart altogether from loss of earnings. No record has been kept of similar losses resulting from slow working in docks, repair yards, engine works, etc. The inflationary effect of delays of this nature, multiplied by an incalculable figure as they must be when applied to the mercantile marine as a whole, is best left to the imagination.

Turning now from the balance sheet to the consolidated profit and loss account, it will be seen that the gross profit from ships trading and all other ancillary businesses amounted to £4,646,996. Of this amount £1,969,163 has been provided for depreciation of wasting assets; £774,895 is required for current income tax (here and abroad) and profits tax, and a further £730,482 is required to provide for the future taxation liability in respect of initial wear and tear allowances. The result is that the net amount brought into the parent company's account is £696,982, of which £340,000 has been transferred to fleet replacement account and a further £40,312 has been required to pay the preference share dividend, leaving a very modest surplus to be dealt with.

Dividend Limitation

As stated in the directors' report, a dividend of 9½ per cent on the ordinary stock of the company is recommended, being the average of the gross distributions for the past two years. But for the Chancellor's statement and the White Paper issued on July 27, which foreshadowed legislation limiting the dividend permitted to be paid on equity or risk-bearing capital, it had been your Board's intention to recommend the payment of 10 per cent on this occasion. The small additional payment, stripped of 9s. 6d. in the pound, would have involved a very small increase in the dividend receivable by each of our several thousand stockholders, and in any event part of such dividend would no doubt have found its way back into the hands of the tax gatherer in the shape of surtax. In the circumstances we regret the necessity of restricting the distribution to the permitted amount of 9½ per cent.

The White Paper has as yet no legislative authority; its interpretation is in many respects open to doubt and indeed there can be no authoritative interpretation until legislation has been approved by Parliament many weeks hence. It is claimed that dividend limitation is necessary to arrest inflation; in fact it is merely another political expedient—one of a long series of such expedients. In 1948 your company agreed, at the behest of the Government, to put a ceiling on the ordinary stock dividend distribution for one year, in the hope that recurring demands, and strikes to enforce those demands, for increased wages would be arrested. That hope was not fulfilled, but in the following years we continued voluntarily to restrict our

dividend distribution in order to make our small contribution to the avoidance of inflationary tendencies, believing that such action was in fact also in the best interests of the company inasmuch as it was equally desirable that we should retain and utilise the major portion of our earnings in maintaining our fleets in the maximum degree of efficiency and volume. A large number of other industrial organisations adopted a similar policy. In the result, however, wage demands continued to chase after the ever-increasing cost of living, which was contributed to in part by the devaluation of sterling but chiefly by the Government's mania for spending while at the same time urging others to save.

Industry's reward for its cooperation in Government policy was the imposition in the last Budget of an addition of 20 per cent to the profits tax on distributed profits, plus an additional 6d. in the £ for income tax. The final blow—if it is the final one—is this effort to restrict progress by the expedient of controlling dividends by legislation; an effort already doomed to failure as the ink has scarcely dried on the White Paper before further demands for substantial wage increases were announced and for which no doubt yet another expedient will be sought. We regret that our 12,000 ordinary stockholders are among the many who must suffer from the effects of the increased cost of living without being permitted to enjoy any compensating increase in income on their savings.

In my statement a year ago I referred to the effect of the devaluation of sterling upon the Canadian members of our staffs and I mentioned that it would cost the company approximately £75,000 to correct that situation. The matter has now been dealt with to the satisfaction of the Canadian members of our super-annuation scheme. It will be noted also that we have set aside a sum of £150,000 (equal to the 2½ per cent distributed to stockholders in March last) for allocation to staff pension funds.

Composition of the Group

Having now dealt with the company's balance sheet and the consolidated accounts, and having commented on matters directly arising thereon, stockholders will, I think, be interested to have a more general review of historical facts, and of the immediate future as seen from the Board room. There are eight shipowning companies in the consolidated group (apart from several associated companies not consolidated) which directly own upwards of seventy ships of all types—passenger ships, combined passenger and cargo ships, cargo liners, fully refrigerated ships, a few general carriers and so on. Of these seventy ships 16 have been built during or after the last war. As already stated, they stand in the books of the owning companies at £19,824,940, less the £1,191,822 included therein being payments on account of new tonnage on order.

Undoubtedly the ships are worth, in today's money values, considerably more than the amount at which they stand in the books—indeed they cost a great deal more, as during the past four years alone £11,618,590 has been written off first cost, including transfers from fleet replacement reserve. There is not so much comfort to be drawn from these figures as one might think as they are overshadowed by the ever present problem of the cost of replacement. Assuming arbitrarily that only one-twentieth part of the fleet needs to be replaced each year, and ignoring any additional building for the protection of trade rights, there is an apparent and continuing liability of the order of £3,500,000 per annum for new ships based on the current cost of construction, which, of course, is not stable but is liable to rise still further so long as inflationary tendencies continue. Indeed the recently announced increase in the price of State controlled steel will add yet another unknown factor to the bill for the ships we now have on order. It will readily be seen what a heavy task lies ahead of us, aggravated as it is by current

rates of income tax and profits tax and methods of assessment.

A period of inflation invariably follows a devastating war, but who shall say when the pendulum will commence to swing the other way, as it did in the 1920s when values tumbled heavily and much in advance of the fall in costs of construction. These things must be borne in mind in considering future policy in relation to shipbuilding, and inevitably the question arises, what would be the effect upon world trade generally and upon the shipping industry in particular, if and when the pendulum should swing back?

World Trade and Military Traffic

The present volume of world trade involving overseas transport is somewhat confused by the still considerable amount of military and semi-military traffic that is moving, it has also been confused since the autumn of last year by heavy shipments of coal from the North American seaboard to Europe. It is difficult therefore to relate world trade to available tonnage. Nor is it easy accurately to relate available world tonnage to effective tonnage by reason of the large amount of tonnage remaining in the United States Reserve Fleet, from which it is reported that something in excess of 200 ships has been transferred to active service in the past year. The statistical facts, however, are that whereas in 1939 steam and motor tonnage owned by maritime nations amounted to 68,509,432 gross tonnage (U.K. proportion 17,891,134), the corresponding figures for 1950 were 84,583,155 gross tons (U.K. proportion 18,219,247). Some adjustment of these figures is necessary to take account of the large increase in the amount of tanker tonnage. Probably a further adjustment should be made for the large amount of existing tonnage which must be nearing the end of its effective life—that is, ships over 25 years of age amounting to 16,954,842 gross tons (U.K. proportion 2,935,188). Against this latter figure there is an offset for 5,331,000 gross tons of shipping under construction, including tankers.

Mr. Micawber's problem of balancing income and expenditure looks simple in comparison with balancing world tonnage and world trade in terms of transport. But that is the problem with which shipowners are faced; unless the two are finely balanced, freight rates and tonnage values become distorted according to which side of the picture is unbalanced.

The point that does seem to be clear beyond doubt is that while the U.K. has more than recovered its prewar volume of tonnage, the position is not so satisfactory if expressed in terms of the percentage of world tonnage, the respective percentages being 26.11 per cent in 1939 and 21.54 per cent in 1950. The comparison would be even less satisfactory if account be taken of the large proportion of tanker tonnage included in the 1950 figures.

Necessity for Large Reserves

It would seem therefore that both from the point of view of national defence, and the domestic necessity of maintaining our fleet, it is right to continue to build new ships for the requirements of our various trades, notwithstanding present inflated costs. It follows that we must continue to put aside large reserves for that purpose. It equally follows that there must be a gradual decline in our ability even to maintain the present volume of tonnage if taxation and methods of assessment continue on the present level and basis. It is therefore to be hoped that the Royal Commission on the Taxation of Profits and Income will take serious and understanding notice of the representations which have been made by the shipping industry and will bear in mind that while it is practicable to shear a sheep once a year, skinning it has dire consequences.

In recent months gross earnings of the shipping industry have been on a higher level, but it should not be overlooked that gross earnings have been very largely offset by violent increases in operating expenses and inordinate delays in port. How often does one read

of nationalised industries being hit by mounting costs, as a prelude to some violent increase in price which has to be swallowed, thereby adding to the burden which public companies and others have to contend with? From time to time liner shipowners have been criticised for the development, regulation and protection of trade routes by conferences, but the experience of the past year provides an excellent illustration of the fact that in circumstances such as exist today, open market freight rates for bulk cargoes are liable to advance more quickly and in a much sharper curve than liner conference rates. It is natural that that should be so, but the fact is frequently lost sight of by critics of liner conferences.

Sources of the Company's Earnings

As regards the earnings of the Furness group of companies I should remind stockholders, and any other readers of this statement, that a substantial proportion is derived from businesses other than shipowning, and outside the United Kingdom, added to which some of our ancillary businesses abroad have derived benefit from the devaluation of sterling.

It is interesting to record that your company has been entrusted with the management of the Festival ship *Campania* which has made a series of most successful visits to various ports around the coasts of Britain and Northern Ireland. The number of visitors to the ship is approaching the million mark and this floating exhibition has naturally had a special appeal to a large number of people who have been unable to visit the main exhibition on the South Bank of the Thames.

During the year various directors have made personal visits overseas; Mr. Keville to South Africa, Mr. MacGillivray and Mr. Barron to different parts of the Mediterranean, Mr. Black to Newfoundland and Nova Scotia, and myself to the United States, and Mr. Stoker will be absent from the annual meeting, at which time he will be in Canada. These visits are of great importance to the administration and development of our business.

If stockholders look for any forecast of the future trend, I would simply remind them of the great difficulty in anticipating what lies ahead, a difficulty which is possibly more obvious in relation to shipowning by reason of its international character than in more localised industries. Legend has it that the owl gathered wisdom by listening more than speaking, but in the present state of world affairs, both economically and politically, even a listening role is apt to lead to confusion rather than wisdom. Consequently I will merely assure stockholders that our current business continues to be satisfactory; we have good tools to work with, an enthusiastic staff and a widespread organisation. We also have confidence in the future of British shipowning provided the achievements of the past and hopes for the future are not shattered by the introduction of doctrinal theories such as have resulted in costly disillusionment in other key industries.

Tribute to Staff

In reference to our staffs, I cannot say precisely what the numbers are, but they are stationed ashore, afloat and at docks in all parts of the world—Australians, New Zealanders, South Africans, Canadians, Americans and a host of others. Everywhere, and whatever their nationality, they serve the company with enthusiasm and loyalty. Their numbers run into thousands and their remuneration into millions; to all of them our thanks are due, not only for the skilful manner in which they perform the duties for which they are employed, but also for the manner in which they safeguard the company's prestige and keep its flag flying mast high.

I regret to have to conclude this statement with a report of the recent death of a late colleague, Mr. H. C. Blackiston. For many years Mr. Blackiston was the company's resident director in the United States and was held in the highest regard on both sides of the Atlantic. His record stands high in our annals.

COAL AND OIL

EUROPEAN COAL IMPORTS

THE highly uneconomic imports of coal from the U.S.A. into Europe, which played an important part in bridging European supply and demand in the first few years after the war, and were started again last winter, are now running on a very large scale. They rose from only 229,000 tons in the first, and 579,000 tons in the second half of 1950 to the very high figure of 8,470,000 tons in the first six months of this year, reaching 1,836,000 tons in the month of June. Most countries of Western Europe received substantial quantities of U.S. coal in the first few months of this year, notably the U.K. and Ireland, France, Italy, Germany, the Benelux countries, Sweden, Norway and Switzerland. In addition, 340,000 tons from South Africa were imported by European countries in January-June 1951, compared with 269,000 tons in the whole of 1950. The Coal Trade Sub-Committee of the E.C.E. has estimated that in the second half of this year the total deficit between supply and demand will total 22.5 million tons of coal and coke in the whole of Europe (which, in effect, means, in Western Europe). A substantial part of this deficit will be filled by deliveries from the U.S.A. and South Africa, but coal will nevertheless remain scarce in most European countries. The U.K., which has drastically cut exports both to European and non-European countries, has still not yet decided whether to import U.S. coal in the next few months. Western Germany, which under the Ruhr Authority regime is compelled this year to export coal at a rate of 6.2 million tons a quarter, is trying to make good the shortfall by large-scale imports from the U.S.A. Most of the other countries of Western Europe are normally net importers, and all require U.S. coal because the combined exports from the U.K., Germany and Poland are inadequate to meet their needs.

Coal Production Rising

DESPITE the need for growing imports, however, the quantities of coal from European sources available for use in Western Europe are now considerably larger than last year. As the accompanying table shows, the output of coal in the chief producing countries reached 245.8 million metric tons in the first six months of this year, being 12.2 million tons higher than in January-June 1950, and 14.2 million tons higher than in July-December 1950. Deliveries to Western Europe from Poland and Czechoslovakia totalled nearly 10 million tons during the whole of last year, but deliveries to some countries, at least, have since been reduced. On the other hand, there has been a reduction in exports from Western Europe to overseas destinations. The U.K. has reduced her coal shipments to non-European countries from over three million tons in the whole of last year to approximately 500,000 tons in the first half of 1951; other producers in Western Europe have never exported very large quantities of coal except to European countries and their dependencies in North Africa.

COAL PRODUCTION IN WESTERN EUROPE
(Thousand Metric Tons)

	Jan-June 1950	July-Dec. 1950	Jan-June 1951
U.K.	111,779	107,976	114,468
Western Germany	61,834	65,747	69,118
France	25,944	24,900	26,744
Saar	7,530	7,561	8,273
Belgium	14,180	13,124	14,915
Netherlands	6,100	6,148	6,240
Spain	5,496	5,534	5,300
Others	737	674	770
Total	233,600	231,664	245,828

In these figures, some of the smaller entries are estimates, while for the German output lignite production has been included at a conversion ratio of 4.5 tons of lignite to one ton of hard coal. The increase in coal production in Western Europe between 1950 and 1951 is due almost exclusively to an increase in the

average output per worker. The total number of men employed in hard coal mining in the six largest producer countries has remained virtually stable at about 1,610,000 between June 1950 and June 1951; a small increase in Western Germany having been offset by a decrease in France. Even so, the output per man-shift in hard coal mining remains 31 per cent below the 1937 level in Western Germany, and about 20 per cent below this level in the Netherlands. Production in both countries is consequently lower than before the war, and the same is true of the U.K., where the output per man-shift has increased, due to longer hours and to special appeals by the authorities, but where the number of mineworkers is now 10 per cent lower than in 1937.

OFFICIAL NOTICES

New Company

NORTH WEST TUGS, LTD., 10 Dale Street, Liverpool. Registered August 25. Nominal capital: £100 in £1 shares. Directors: Not named. Subscribers: R. L. Adam, 10 Water Street, Liverpool, 2 (solicitor); L. S. Cooner, 10 Dale Street, Liverpool, 2 (accountant).
[Information from *Jordan's Daily Register of New Companies*]

Increases of Capital

BILLITER STEAMSHIP CO., LTD., Plantation House, Fenchurch Street, London, E.C.3.—Increased by £50,000, in £1 shares, beyond the registered capital of £5,000.

RICHARD GREEN, LTD., manufacturers of chains, cables, anchors, pulley-blocks, ships' tackle, etc., Cokeland Works, Cokeland Place, Cradley Heath, Staffs.—Increased by £47,000, in 20,000 5 per cent cumulative preference and 27,000 ordinary shares of £1 each, beyond the registered capital of £3,000.

Reception at Baltic Exchange for I.A.T.A.

The chairman and directors of the Baltic Exchange held a reception on Thursday evening for the officers and members of the executive committee of the International Air Transport Association, to mark the holding of the I.A.T.A.'s annual meeting in London next week. The guests, headed by Mr. Warren Lee Pierson, president of the I.A.T.A., were received by Mr. B. H. Perl, chairman of the Baltic Exchange.

LAID-UP SHIPPING IN THE U.K.

The Chamber of Shipping's quarterly statement of the number and gross tonnage of ships laid up at ports in Great Britain and Ireland on July 1, is given below, together with the figures for previous quarters. The further table shows the number and gross tonnage of those ships which were awaiting or undergoing repair.

It will be observed that the bulk of the laid-up tonnage again consisted of vessels awaiting or undergoing repair; that the figure for British tonnage, 362,879 gross tons, shows a marked reduction from the figure for the previous quarter, itself the lowest quarterly figure since collection of these statistics was resumed in 1946; and that the British tonnage laid up for reasons other than repair had fallen to 48,910 gross tons.

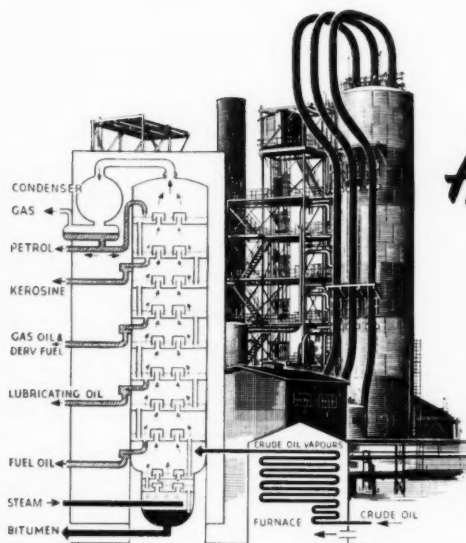
TOTAL LAID-UP

	British Vessels No.	Gross Tons	Foreign Vessels No.	Gross Tons
July 1, 1950	199	973,112	8	37,401
October 1, 1950	156	639,163	8	51,084
January 1, 1951	144	685,344	9	39,927
April 1, 1951	149	610,574	14	34,180
July 1, 1951	97	362,879	18	55,364

VESSELS AWAITING OR UNDERGOING REPAIR

	British Vessels No.	Gross Tons	Foreign Vessels No.	Gross Tons
July 1, 1950	155	825,303	4	21,304
October 1, 1950	116	516,438	6	50,122
January 1, 1951	108	603,319	6	30,857
April 1, 1951	120	554,078	13	31,514
July 1, 1951	82	313,969	15	49,848

INTERESTING FACTS ABOUT OIL



No. 4.

How is oil refined?

Crude oil at the well head has no commercial application. It must first be treated to make the finished products known as gasoline (petrol), kerosine (paraffin), fuel oil, lubricants, bitumen and many other products less commonly associated with oil, such as cosmetics, matches, insecticides and efficient alternatives to soap.

Distillation is the fundamental principal of oil refining. The process of distillation was probably in use at least 2,000 years ago; Aristotle mentioned it in the 4th Century B.C. In its simplest form it consists of heating a liquid above its boiling range and then cooling the resultant vapours so as to obtain the condensed liquid known as the "condensate" or "distillate."

Today, by a process called "Fractionation" or "Fractional Distillation" crude oil can be split up into various "cuts" or "fractions" which can be recovered separately, each fraction containing all the respective hydrocarbons which vaporize within a particular temperature (boiling) range.

Fractionation is carried out in vertical steel cylinders which may be a dozen feet in diameter and 120 feet high. The crude oil is pre-heated in a furnace and part vapour, part liquid enters near the base of the tower, which is divided into compartments by perforated trays. The hot vapours rise towards the top of the tower through the perforations in the trays which are so constructed that liquid can be collected upon them and the rising gases forced to pass through the perforations. The vapours having high boiling points condense in the hottest part at the bottom of the tower and those with the lowest boiling points pass to the cooler sections at the top before condensing. The lightest fractions pass out still in vapour form and are condensed separately. The various trays are fitted with overflow pipes leading to the tray below so that when sufficient liquid has been collected on any tray, the residue spills over through the pipe to the tray below and the process is repeated. By this means a more exact separation is obtained than would otherwise be possible. The various products can be drawn off from the trays as "side streams," as required—usually the process is carried out in a series of towers, having varying pressures.

INTERNATIONAL OIL BUNKERING



ANGLO-IRANIAN OIL COMPANY LIMITED

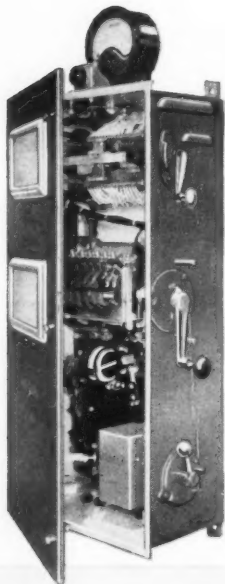


GENERAL BUNKER SALES AGENTS

WM CORY & SON LTD., CORY BUILDINGS, FENCHURCH STREET, LONDON, E.C.3



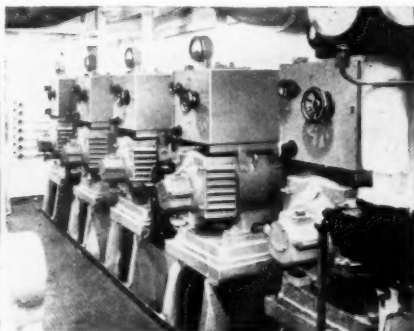
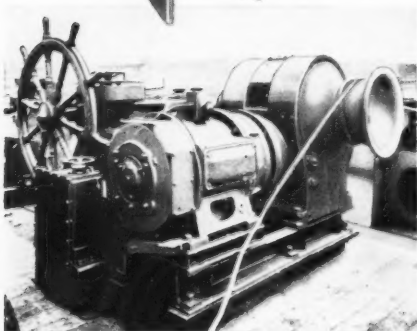
Electric Equipment for Marine Service



Motors and Control Gear

For every power application aboard ship, BTH can supply a suitable A.C. or D.C. motor, together with the appropriate control gear—made in various types and enclosures depending on the required size and duty. Typical examples are as illustrated:— (1) D.C. control pillar; (2) 8/32 H.P., two-speed, weatherproof, A.C. warping winch motor; (3) D.C. Marine motors driving brine pumps.

BTH also manufactures:—
 Turbo-electric propulsion.
 Diesel-electric propulsion.
 Electric couplings and gears for geared diesel drives.
 A.C. or D.C. Auxiliary equipment.
 Turbo-generator sets.
 Oil engine-driven generators.
 Marine Radar.
 Mazda lamps and lighting equipment.



BRITISH THOMSON-HOUSTON

THE BRITISH THOMSON-HOUSTON CO., LTD., RUGBY, ENGLAND

Member of the AEI group companies

A 12

THE AIR REGISTRATION BOARD

THE AERONAUTICAL EQUIVALENT OF LLOYD'S REGISTER

By E. N. B. BENTLEY

THE Air Registration Board, whose organisation and functions were described in *THE SHIPPING WORLD* almost exactly three years ago, can be considered as the aeronautical equivalent of Lloyd's Register of Shipping. It is a body independent of the Government, and its council includes representatives of the operators, constructors and insurers of aircraft. By the Air Navigation Act of 1936, the Secretary of State for Air delegated many of his powers and duties to the A.R.B.

A good idea of the working and achievements of the Board is given by the report for the year ended March 31, 1951. Lord Brabazon of Tara, the chairman, in introducing the report referred to the serious curtailment in civil aviation development and sounded a warning against again allowing armament programmes to call a halt to civil development. Among the technical problems mentioned were those due to high altitude gusts and the design of structures to withstand them. The statement that lack of airworthiness is rarely the direct cause of an accident is an indication of the success of the Board's policy and an encouragement to its members. One of the most significant statements in the chairman's introduction was that the original aim of the International Civil Aviation Organisation to achieve a complete set of international airworthiness requirements has not proved fully successful. The long time taken to achieve agreement among some 50 nations, and the ever changing nature of aircraft design, inevitably meant that the ICAO requirements would always be out of date. It is therefore suggested that ICAO should now set itself the more modest target of establishing important fundamental requirements and filling in details only when stability has been achieved. My own opinion is that stability in design is no more likely to be achieved in the next quarter of a century than it has in the last.

Equal to ICAO Requirements

On the subject of airworthiness requirements it was stated that the British performance requirements are of such a standard as to be accorded a status equal to that of existing ICAO requirements. In the new British Civil Airworthiness Requirements, issued in January 1951, there are several new features which relate to modern design problems. In particular the need for the utmost reliability of windows in pressurised high-altitude aeroplanes is emphasised, also the improvement in fire precautions and better protection in the case of crashes. Agreement has been reached on the draft requirements for turbine engines and tentative requirements published for the approval of turbines in icing conditions. Investigation of prototype designs, which includes structural strength and measured performance data, before granting a Normal Category Certificate of Airworthiness, has lessened somewhat in the past year. Recommendations for a Normal Certificate of Airworthiness were made for the four-engined Handley-Page Hermes IV and for the little four-engined de Havilland Heron, as well as for the Slingby Motor Tutor (a powered glider, in effect). The Board advocates a long period of development flying before certification, in order to find and remedy such defects as can only be brought to light by continuous operation. As an example, the Hermes IV completed 2,000 hours flying, equivalent to about 500,000 miles, before certification; the Airspeed Ambassador had done over 1,200 hours, up to the date of the report. The investigation of the small airship *Bournemouth* set a number of new and unfamiliar problems to the Board.

During the year recorded, 15 piston engines were type tested and approved and seven gas turbines were also tested. From the development programmes it

seems that the high-powered engines of the future will be almost entirely of the gas turbine type, either turbo-jet or turbo-prop. On the other hand, there seems to be no indication that the turbine engine will replace the piston engine in the smaller sizes. Aircraft electrical equipment is becoming larger, more powerful and more complicated; whereas the postwar aircraft used to carry generators of up to six kilowatts and generally used 24-volt systems, now the power is tenfold or more and voltages are sometimes up to 110. Electronics, at one time confined to communication and navigation equipment, are now used in more vital parts such as the automatic pilot. This means that an altogether higher standard of reliability is required, particularly in the valves, as the consequences of a sudden runaway of a powerful automatic pilot could be disastrous. Another indication of the increased complexity of equipment was the fitting of radar-operated cloud and collision warning apparatus to a large transport, for experimental purposes. An important step in aircraft radio progress was the satisfactory completion of radio trials on the de Havilland Comet, in which all aerials are buried in the structure. An inspection of the normal type of air liner will show what a big difference must be made in the drag of the aeroplane when all the various aerials are built-in, instead of waving in the breeze.

Work Overseas

The A.R.B., following its policy of raising the standard of airworthiness and safety, has come to an agreement with the Ministry of Civil Aviation that, although existing certificates for such types will still be renewable, no new certificates for such types will be issued. The Board often surveys aircraft registered overseas and has acted at the request of the civil aviation authorities of India, Pakistan, Sweden, Persia, Aden, Burma, Eire, East Africa, Saudi Arabia, Yugoslavia, Southern Rhodesia and Greece. In addition to certifying aircraft and maintaining an up-to-date Civil Aircraft Register, the Board also examines, tests and approves pilots and flight engineers, as well as the licensed maintenance engineers who look after the aircraft. The total number of certificates of airworthiness issued in the year was 1,494, of which nine were for prototype aircraft. Pilots and flight engineers licences amounted to 1,232, of which over 1,000 were commercial pilots' licences. Ground engineers' licences totalled 5,291.

The international character of air transport, like sea transport, implies the need for overseas representation for the Air Registration Board. This is achieved partly by means of overseas offices in Cairo, Karachi, Lagos, Montreal (ICAO liaison office), Nairobi, Reykjavik, Singapore and Trinidad; and partly by visiting representatives from the headquarters at Brettenham House in London or the nearest overseas office. In this way the Board is able to give advice and assistance to those nations less advanced in aeronautics and thus help to maintain a more uniformly high standard of airworthiness of aircraft, crews and operating conditions.

The activities of the Air Registration Board thus include not only the day-to-day routine work on certification of aircraft and their air and ground crews, but also technical advice on a worldwide basis. In addition, there is the even more onerous and exacting task of formulating airworthiness requirements under the constantly changing technique of aviation development. It says much for the organisation and quality of the Board's staff, under their secretary and chief Executive, Mr. R. E. Hardingham, and chief technical officer, Mr. W. Tye, that they achieve so much with a total staff of 223, including those at home and overseas.

AIR CARGO IN THE ANTIPODES

AUSTRALIAN NATIONAL AIRWAYS ACTIVITIES

By "ALBATROSS"

AIR CARGO in Australia has grown rapidly since the war, and some useful lessons are to be learned from such activities at the opposite end of the British Commonwealth. Australian National Airways (Pty.), Ltd., founded by the Holyman brothers in 1932, is now the largest privately owned airline company in Australia, and also occupies a prominent position in the air cargo business. Most of the capital is owned by five shipping companies: the Orient Steam Navigation Co., Ltd.; the Adelaide Steamship Co., Ltd.; the Union Steam Ship Co. of New Zealand, Ltd.; William Holyman & Sons (Pty.), Ltd.; and Huddart Parker, Ltd. In addition to their normal passenger fleet of some thirty aircraft, which covers a route mileage of 11,200 miles, A.N.A. also operate Bristol Freighters and DC3s which carried a total load of over 30,000 tons during 1950. Bristol Freighters are also used on the "Air Beef" scheme. An account of A.N.A.'s cargo carrying activities has been given by the assistant manager in Sydney, Mr. Ian G. Webster, in an address which he delivered to the Institute of Transport, New South Wales.

Drop in Urgent Cargo

An interesting point is that there has been a marked drop in the volume of cargo dispatched purely because of the urgency factor. More and more air cargo business is being sold in the hard way, by the traditional door-to-door canvassing. It does not generally seem to be known that Australian air cargo rates are the lowest in the world, and that in terms of ton-miles per head of the population Australia is well among the leaders in airline statistics. Although their cargo rates are beginning to reflect the general world rise, Australian domestic air cargo rates vary from slightly over 1d. per lb. per 100 miles (22.4d. per ton-mile) on long hauls, to 1½d. per lb. per 100 miles (38.5d. per ton-mile) on short runs.

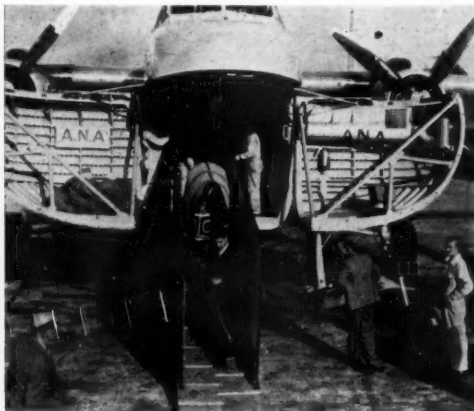
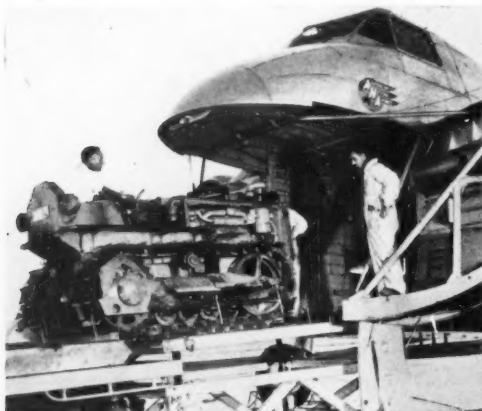
The postwar development of this traffic really began in February 1946, when the Government controls and priorities on air cargo were removed. In the beginning the main cargoes were such things as flowers, perishable goods, drugs, fashion goods and motorcar spares. Now bulk loads of fruit and vegetables, boots and shoes, ice

cream, clothing, furnishings, livestock, machinery, tractors, car bodies, wool, timber and cement are commonplace. Examples of the competitive rates of air cargo are high-grade shoes selling at 45s. to 85s. a pair, which are easily able to stand the cost of 1s. 2d. a pair for air transport from Melbourne to Brisbane. Crisp fresh vegetables can carry the 6d. per lb. for air freight, compared with vegetables carried by train at half the price and taking two days for the journey.

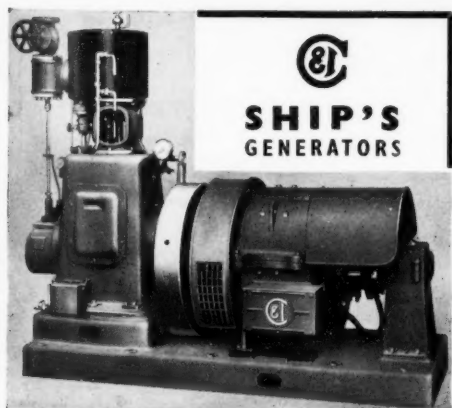
Advantages of Time Saving

Over 80 per cent of the crayfish sold in Melbourne today is air freighted from Tasmania. In some special cases the speed of air transport, compared with that of surface transport, offers advantages out of all proportion to its cost. Factory machinery and staff were moved, in four phases, from Sydney to Hobart; the total production loss was 14 days, compared with a probable three months by train and boat. A jam factory was saved from a serious hold-up by taking up an apricot-stoning machine from the main factory and flying it to the other factory 500 miles away, where it was installed and working by the next day.

The Bristol Freighter used for many of these cargo operations is one of the few types in the world specially designed for such work, much of which would be impossible without them. With direct entry doors in the front, at lorry level, giving an opening 8 ft. wide and nearly 7 ft. high, loading into the 2,000 cu. ft. hold is a comparatively straightforward job. Lightly loaded, in proportion to its size, and with big low-pressure tyres, the Freighter can operate easily from grass or dirt aerodromes and can take off fully loaded in 500 yards. Cars and tractors are a frequent cargo and the biggest single load carried by A.N.A. was a 10,000-lb. road grader which was in action in Flinders Island 6½ hours after leaving the Melbourne factory. Bulk freighting of ice cream is also a consistent day-in day-out job, and another service is the freighting of empty canisters from Melbourne to Devonport, Tasmania, whence they are flown back packed with "Ovaltine." Bales of wool have been flown for two seasons now, from Tasmania to Victoria; and the grazier has learned that air transport enables him to



ANA Bristol Freighter aircraft handle many different loads: (left) a tractor being loaded for Flinders Island, and (right) a racehorse being led down a specially designed ramp



**SHIP'S
GENERATORS**

CAMPBELL & ISHERWOOD

Complete Electrical Marine Installations

- DIESEL & STEAM-DRIVEN GENERATORS
- VERTICAL, HORIZONTAL & AIR-STREAM MOTORS
- PATENT BAGGAGE HOISTS
- SWITCHBOARDS
- FLOODLIGHTS AND SPECIAL FITTINGS

MARINE ELECTRICAL

Repair Service




at all the principal Ports in U.K. and at Antwerp

**CAMPBELL
and
ISHERWOOD Ltd.,**



**PENPOLL WORKS • HAWTHORNE ROAD,
BOOTLE • LIVERPOOL 20**




Branches at Newcastle, Glasgow, London, Cardiff, Antwerp




FLY YOUR FREIGHT












by B.O.A.C.

to all six continents




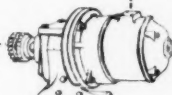




*Consult your local B.O.A.C.
Forwarding Agent and ask for your free
copy of "B.O.A.C. Air Freight"*





BRITISH OVERSEAS AIRWAYS CORPORATION IN ASSOCIATION WITH QANTAS AIRWAYS LIMITED, SOUTH AFRICAN AIRWAYS AND TASMAN EMPIRE AIRWAYS LIMITED.



Ten million kilograms of
cargo of all sorts have been



carried by BEA to all parts
of Europe within the last



twelve months. And still the
steady increase continues—



at the rate of 200,000
kilograms more every month.

fly freight BEA

THE LARGEST SCHEDULED
AIR FREIGHT SYSTEM IN EUROPE

For full details apply to your
Freight Agent, any BEA office; or just ring
WESTern 7227 or WAXlow 4311

BRITISH EUROPEAN AIRWAYS

JAMES BURNESS & SONS LTD.

FOR ALL
**AIRCHARTER
AND
AIRLINE
RESERVATIONS**

NO BOOKING FEES

7, KINGSWAY,
LONDON, W.C.2.

Temple Bar 1001

For **ECONOMY**

SPEED

SERVICE

fly with CREWSAIR LIMITED
11, Bruton Street, London, W.1

For freight and passenger enquiries apply :—

Managing Agents
Messrs. Lep Air Services Ltd., Sunlight Wharf,
Upper Thames Street, E.C.4. Tel. CEN. 5050

Monthly Air Transport Section

sell his wool in the capital cities months ahead of what would otherwise be possible.

As in other parts of the world, it has been found that in times of industrial (or other) crisis, the airlines experience a marked increase in freight traffic; and an appreciable percentage of this business remains after the crisis has ended. The problem of return loads is also a worldwide one and on some one-way services special low rates are quoted for back loads. Provided these cover the actual cost of handling it is better to have this small revenue than to fly back empty.

The Air Beef Scheme

No description of air cargo services in Australia would be adequate without mention of the "Air Beef" scheme initiated by the Blyth brothers in North-West Australia. Twice a day the A.N.A. Freighter loads up six tons of chilled beef at the £100 airfield at Glenroy and flies it 180 miles to the coastal freezing works at Wyndham, whence it is shipped to other Australian ports and to England. By killing and freezing the beef near the cattle station, and sending the carcasses by air, many weeks are saved and the carcasses weigh far more than they would after the cattle had made the long and exhausting journey to the coast. On the return journey the Freighter brings back supplies, equipment and mail which would otherwise take many days. In the first five months' season ending in September 1950, over 80,000 miles were flown and a total of 9,000 tons of beef carried. This service has revolutionised the beef industry in Northern Australia, where roads and railways are few and the population small. With roads costing about £5,000 a mile and a widely scattered population, there has been little chance of developing the country to any extent. However, the pioneering efforts of MacRobertson-Miller, Australian National Airways and S. J. Conellan, aided and abetted by the Australian Department of Civil Aviation, have completely altered the prospects for settlers in the North. The advent of the air service, with its ability to carry passengers and goods between the coastal cities and the inland townships in a few hours, has completely altered the prospects for settlers. The true meaning of this can be grasped only by those who live there; and the statement by an authority on the cattle industry, who manages 2,000,000 acres in the North-West, is one to cause some thought. He says "Air Beef" is the first step forward in 100 years in the pastoral industry of West Australia. If it fails we will all be drawing rickshaws in the next 30 years."

Pedigree Cattle by Air

Using a new type of "air cattle pen" fitted in a Bristol Freighter, Australian National Airways recently flew several loads of pedigree cattle to a Brisbane livestock show. One consignment was described by A.N.A. as "an Australian record for a cattle air lift in one aircraft." It comprised nine Shorthorn bulls, each weighing nearly half a ton, flown to Brisbane from Melbourne, via Sydney. Another load comprised five bulls and a heifer with a total weight of 7,600 lb. A crowd of 100 people watched the unloading of one load of ten show bulls from New South Wales and Victoria. The eight Victorian bulls alone weighed 10,087 lb., and two slept throughout the trip. An A.N.A. official said that cattle could be flown in the new type of pen without fear of damage. Each beast was completely segregated from its companions.

Helicopter Shipped to Canada for Trials

A Bristol Type 171 Mark III "Sycamore" helicopter left Bristol recently for Canada, where it is to undertake winterisation trials for the Ministry of Supply. Before crating, the machine was so-nosed with a special plastic material. Loading it aboard the cargo ship at Avonmouth Docks proved a delicate operation, for the crate—well over 40 ft. in length—was too long to be lowered straight into the hold, and had to be tilted and lowered at an acute angle. During trials in Canada, the Type 171 will be flown by Ministry of Supply pilots. In June, another Mark III machine was flown to Khartoum in the hold of a Bristol Freighter to undertake tropical trials.

Reduced Airline Rates**Effect of International Competition**

IN THEIR current *Air Charter Bulletin*, E. A. Gibson & Co., Ltd., discuss the recent announcement by BOAC and BEA that they are interested in providing a third-class form of air transport for passengers, at considerably cheaper rates than those now in force. Reduction in fares will be achieved apparently, by cutting out all the "frills" which have become an established part of airline passenger routine.

This announcement, the *Bulletin* states, comes at a time when indirect price reduction by airlines on their tickets has reached fantastic proportions. The scheduled airlines have their rates fixed by the International Air Transport Association, which in some respects is equivalent to the Shipping Conferences. The tariffs, having been agreed, are applicable to all operators over the same route. As almost every route in the world is duplicated, and some of them in fact, are even triplicated, competition for business between carriers is intense.

Each line operating such a route anywhere in the world exploits its own particular selling point. These can come under three main headings: (1) Efficiency of operation; (2) the type of aircraft operated by the carrier, and (3) an indirect reduction of the fare achieved by providing meals and drinks free, and giving away free gifts.

The idea of deglamourising air transport, and therefore making it available to a bigger section of the public, is not a new one. In fact, such a system has already been in operation in the USA for a few years. Certain operators run what are known as "Air Coach" services. These are scheduled lines which use high density seating aircraft, do not provide transport to and from airports, do not give free meals, and have no steward service.

Free Drinks and Cigarettes

Certainly, expensive meals and free drinks and sometimes cigarettes which are given to passengers could be cut out. This system is not a good one, and the ultimate development of it was shown on the London/Paris route, where the two lines operating out-did each other in giving away champagne and chicken lunches for a 14 hours' flight, and have consequently now had to put their fares up.

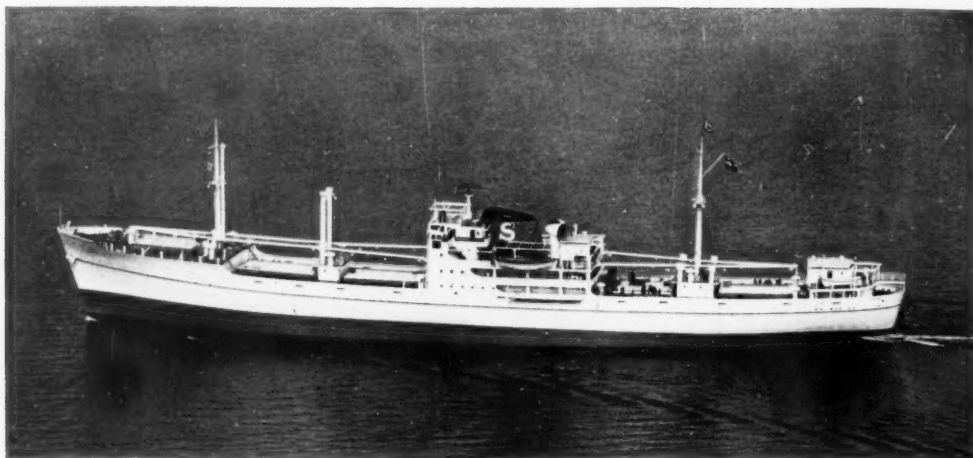
The charter companies have had the operation of third-class routes in mind for some years, but have never been able to get authority to put them into operation. The introduction of third-class fares by the lines, although desirable from the public's point of view, might be a serious blow to charter operators, who have always hoped that eventually they would be able to operate such routes themselves, and who in any case, on a charter basis, are able to work economically at rates very much below those offered by the lines.

The greatest reductions in fares could be made by having high density seat aircraft, giving a reduced standard of comfort and a greater paying load, reducing service on board to a minimum, but leaving ground services as they are, as these form an integral part of air transport. Of course, the services as at present operated should still be retained for that section of passengers which will always be prepared to pay for it.

In spite of the difficulties with which BOAC will be faced in introducing this new measure, it is hoped that they will meet with success. The fact is, that fares could be reduced in spite of general rising costs, allowing the airlines to get more revenue. To do this, they must themselves have more economical and efficient operation than they have at the present time. It appears that British airlines are the only nationalised industry which is generally trying to reduce its costs and increase its efficiency.

Offer to Run Associate Services

The British Independent Air Transport Association, Ltd., has suggested to the Eireann Minister of the Department of Industry and Commerce that Aer Lingus should be encouraged to adopt the system now used by British European Airways to extend public services. Under arrangements agreed with BEA, the independent operators run associate agreement services on those routes on which the Corporation is unable or does not desire to provide any or more services. If a similar scheme were adopted by Aer Lingus, the Independent Operators would be able to provide additional services to meet the ever growing demand from Cardiff, Leeds, Newcastle, Birmingham, Blackpool, etc., in addition to towns in Scotland, for air transport to Dublin. The Association is ready to discuss the scheme with the Republic authorities.



THE CARGO LINER "BENNY SKOU"

FLAGSHIP OF SKOU FLEET BUILT BY BURMEISTER & WAIN

THE cargo motorship *Benny Skou* has been delivered by Burmeister & Wain to Ove Skou, A/S, of Copenhagen. She replaces a previous *Benny Skou*, a rather smaller and slower vessel, which was built by Burmeister & Wain in 1945. The present *Benny Skou* is the third to be built of the owner's new class of fast 7,000-ton deadweight cargo liners. On the basis of experience with the earlier two ships, the original design has been modified in a number of ways, and the *Benny Skou*, which is now the flagship of the fleet, is to be the prototype for four further ships of this class which have been ordered from builders in Denmark and other countries. This class is designed for a loaded speed of 17.5 knots, and on her maiden trip across the Atlantic (no doubt in light condition) the *Benny Skou* maintained an average speed of 19 knots.

The *Benny Skou* is an open shelterdecker, with the forecastle extended to abaft the first of the five hatches. Her loading particulars are as follows:—

Length overall	417 ft. 8 in.
Length b.p.	390 ft.
Breadth moulded	55 ft. 6 in.
Depth moulded to main deck	27 ft.
Depth moulded to shelter deck	35 ft. 6 in.
Draught to summer load line	24 ft. 8 in.
Corresponding deadweight	6,950 tons
Gross tonnage	4,248 tons
Capacity, bale	442,000 cu. ft.
" grain	482,000 cu. ft.
Fuel capacity	970 tons
Service speed	17.5 knots

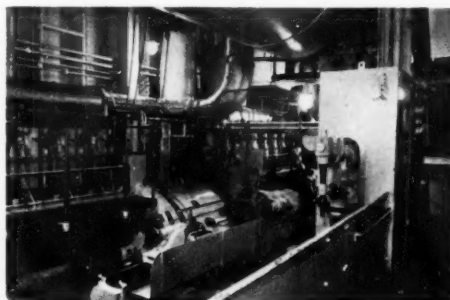


Passengers' dining saloon

In appearance, the ship is undoubtedly very attractive. The sloping bridge front and streamlined funnel contribute notably to the modern look of the ship, and the whole design is well balanced.

There are two decks and five holds. Forward of the engine room a deep tank for 765 tons of vegetable oil has been arranged. In hold No. 5 there are wing tanks for fuel oil or water ballast on either side of the tunnel. The double bottom, stretching from forepeak to afterpeak, is arranged to carry fuel oil, water ballast, and fresh water. The dimensions of the hatches at lower deck level are as follows:—

Hatch	Size
No. 1.	29 ft. 3 in. x 20 ft. 1 in.
No. 2.	37 ft. 4 in. x 20 ft. 1 in.
No. 3.	37 ft. 4 in. x 20 ft. 1 in.
No. 4.	34 ft. 11 in. x 20 ft. 1 in.
No. 5.	34 ft. 11 in. x 20 ft. 1 in.

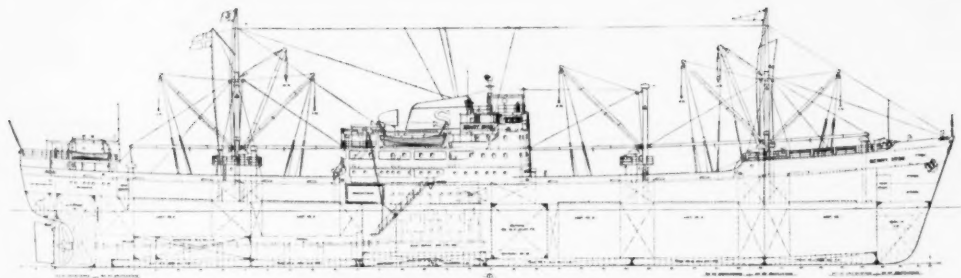


A view in the engine room. It will be noticed that there are slight differences from the plans shown opposite

The five hatches are served by ten 5-ton derricks, with two 25-ton derricks placed on the forward end of No. 2 hatch and after end of No. 4 hatch, respectively. The deck machinery, supplied by Thomas B. Thrige, Odense, consists of ten 5-ton electric winches, two 3-ton capstans, an electric anchor winch, and electric-hydraulic steering gear.

The two 29-ft. lifeboats amidships are served by two sets of Moe's patent davits, while the two 18-ft. dinghies, one of them engine, are hung under ordinary davits aft.

The ship has been fitted with the most modern navigational instruments, including a Raytheon radar, wireless installation with direction finder and radio-telephone from Dansk



Profile drawing of the "Benny Skou"

Radio A/S, echo sounder from Henry Hughes & Son, Ltd., Walker's electric log, and electric rudder indicator and automatic control supplied by Dansk Automatisk Rorkontrol A/S.

The accommodation, for passengers and for crew, is spacious. Passengers' accommodation comprises 6 single-berth cabins and 2 two-berth cabins, in addition to a *de luxe* two-berth cabin on the boat deck. Each cabin has its own bathroom and lavatory. The passengers' dining room aft on the promenade deck is provided with double doors, giving direct access to the deck. The smoking room is situated forward on the same deck, and has large windows in the house front. The captain and chief engineer have separate bed room, bath room, and lavatory; the rest of the officers have large single-berth cabins. With the exception of a two-berth cabin for the boys, the crew is accommodated in single-berth cabins exclusively. Besides their mess rooms, both crew and officers have large recreation rooms.

The bulkheads in passengers' cabins are in polished mahogany, while the furniture is of polished rosewood. The dining room is in polished French walnut throughout, and the smoking room in polished rosewood. Officers have furniture in natural-coloured mahogany, the crew in light oak. The bulkheads here are white lacquered.

All holds are fitted with a CO₂ fire extinguishing system, with smoke detector in the wheelhouse. Ventilation of the holds is by a combination of mechanical and natural ventilation. In the accommodation the ventilation is natural, with electric fans in all cabins and saloons. The accommodation has steam heating throughout.

Propelling Machinery

The main engine is a B. & W. direct reversible, single-acting, two-stroke, eight-cylinder crosshead engine with airless injection. Cylinder diameter is 740 mm., length of stroke 1,400 mm, and output 8,700 i.h.p., corresponding to about 7,000 b.h.p. at 125 r.p.m. Three four-cylinder B. & W. four-stroke auxiliary engines, with airless injection, are each

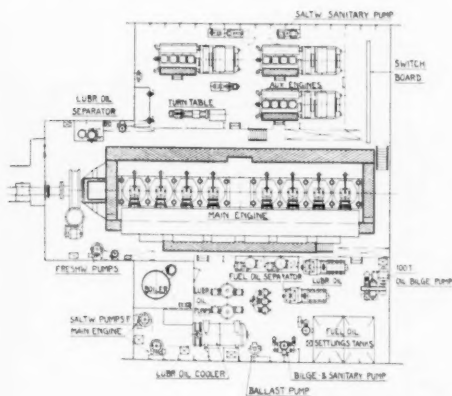
direct coupled to a dynamo of 160 kW at 220 volts and 500 r.p.m. The diesel cylinders have a diameter of 245 mm, and stroke, 400 mm. The output per engine is 240 b.h.p.

All the main pumps for the diesel plant are of the vertical type, direct coupled to electric motors by resilient couplings. There are two pumps, each having a capacity of 260 cu.m./hour, for circulation of lubricating and cooling oil, and three centrifugal pumps for fresh and salt cooling water for the main engine, with a capacity of 270 cu.m./hour. For the auxiliaries there are two pumps of 30 cu.m./hour.

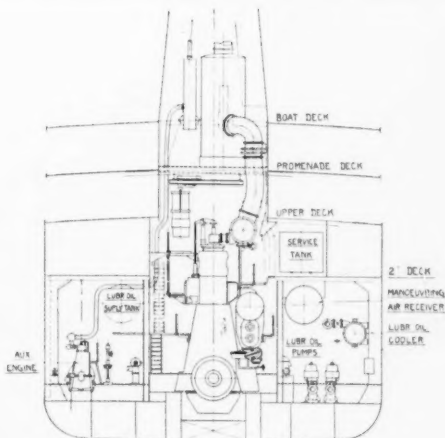
Starting air for the diesel engines is supplied by two electrically driven manoeuvring air compressors, each having a capacity of 4 cu.m./minute intake air, and a pressure of 25 atm. The starting air receiver has a capacity of 21 cu.m. There is a 23 sq.m. oil-fired boiler of 7 atm. working pressure.

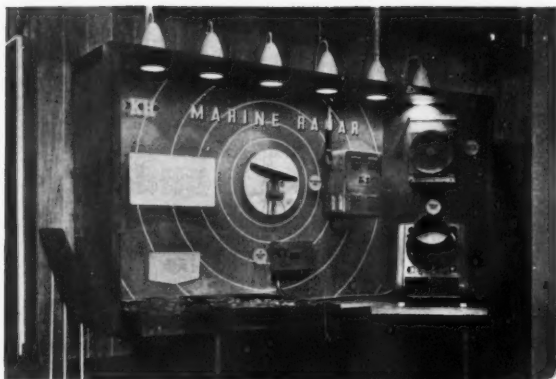
Gauging and Measuring Screw Threads

A new series of handbooks under the general title of *Notes on Applied Science* is being prepared by the National Physical Laboratory. No. 1, *Gauging and Measuring Screw Threads*, has been published by H.M. Stationery Office, price 3s. It is a comprehensive survey of measuring and gauging methods for use in the production and measurement of accurate screw threads and especially of screw gauges. The handbook contains the most up-to-date material available, and its scope covers the whole of current requirements. Appendix I gives a table of symbols which were agreed at the 1945 Ottawa Conference on the unification of engineering standards and Appendix II contains numerical data on the "Unified" thread, as agreed between the U.S.A., Canada and Great Britain as a means of coordinating defence measures in these countries.



Engineer's room arrangement of the "Benny Skou"





ENGINEERING MARINE & WELDING EXHIBITION

Reproduced on this page are pictures of three representative stands at the Engineering, Marine and Welding Exhibition, held at Olympia, London. Above can be seen a view of the stand of Kelvin & Hughes (Marine), Ltd., showing a display unit of a Type 2 marine radar set, together with the monitor signal unit, transmitter and junction-box. Also shown is a model of ships working on the River Clyde, a typical reproduction display of the area appearing on the radar screen. The marine section of the stand of Babcock & Wilcox, Ltd. (left), is shaped in the form of a ship's bridge. The exhibits shown in the picture are, from left to right: a model of a Babcock Integral Furnace marine boiler with, next to it, a working model demonstrating the operation of the Babcock Cyclone steam separator. Next in line is a model of a single-pass marine boiler, followed by a model of a Babcock divided-pass controlled superheat marine boiler. Behind these exhibits are ship models and photographic enlargements of postwar vessels equipped with the company's boilers. A feature of the company's stand is a

sequence describing the development of the watertube boiler for both land and marine purposes, a brochure having been produced to supplement the display describing the part played by Babcock & Wilcox in this development. The opportunity has been taken by Clarke, Chapman & Co., Ltd., to exhibit on its stand a wide range of the company's many products. As can be seen from the picture reproduced below, a display of varied types of winch forms a prominent feature of the stand. There are also a number of working models of capstans, windlasses and pumps, apart from actual pieces of such equipment. Among other exhibits shown are a scale model of a power station watertube boiler and various mine lighting and signalling equipment, including the "Dunelm" circular fluorescent lighting unit



ROUND THE SHIPYARDS

Work in Progress on the North-East Coast

By THE SHIPPING WORLD'S Own Correspondent

ONE of the outstanding features of activity in the North-East Coast area during the past month has been the extensive sea trials of H.M.S. *Daring*, the first of the new *Daring* class destroyers. The *Daring*, which was launched from the yard of Swan, Hunter & Wigham Richardson, Ltd., Wallsend-on-Tyne, in August 1949, has an all-welded hull and the comfort of the crew has been well catered for by the provision of electric galleys, electric laundry and other labour-saving plant. The completion of the *Daring* leaves only one other naval ship building on the Tyne, the aircraft carrier H.M.S. *Albion*, which is being fitted out by Swan, Hunter & Wigham Richardson, Ltd.

The Tyne delivery output for the first eight months of 1951 is below that for the corresponding period last year. The 1951 figures are 10 ships of 113,445 tons gross, as against 17 vessels of 157,310 tons in 1950. By the end of September, however, some of the leeway should be made up, with three ships due to enter service, two of them for Norwegian owners, the vessels being the *Majorian*, *Buesten* and *Chakdina*. With the handing over of these three ships there will be only six vessels left in the fitting out stage, including the *Furness*, Withy liner *Pacific Reliance*, of 9,300 tons gross, the Port Line's vessel *Port Townsville* (9,030 tons gross), and two 18,600 tons gross tankers for the British Tanker Company, the *British Talent* and *British Bulldog*. The *British Talent*, launched in August, is the biggest merchant ship ever built at the Hebburn yard of R. & W. Hawthorn, Leslie & Co., Ltd. Launching output on the Tyne for the first eight months of this year is 12

ships of 134,040 tons gross, as compared with 14 vessels of 139,995 tons for the corresponding period of 1950.

As in the case of yards on the Tyne and Tees, all the Wear builders have orders on their books to keep the staffs fully employed for the next three or four years, and the Sunderland firms are still sharing in the flow of orders reaching the area. There are several big ships under construction on the Wear, with cargo ships more predominant than for some time. William Doxford & Sons, Ltd., will launch on September 19 the first of two 8,600 tons gross tankers which form part of an order for four tankers for the Overseas Tankship (U.K.), Ltd. Sir James Laing & Sons, Ltd., hope to launch in the near future the first of three tankers, each of 10,000 tons gross, for the London & Overseas Freighters, Ltd.

Orders for Dry Cargo Ships

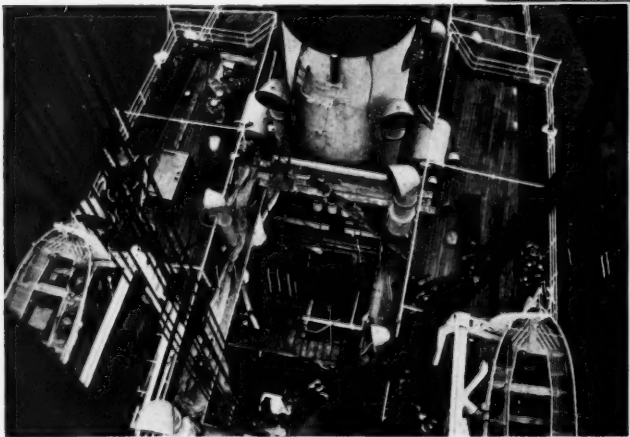
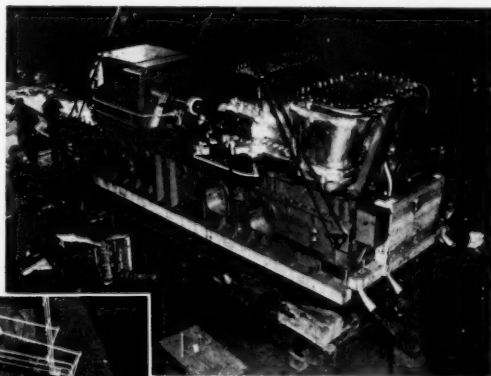
Orders for new tonnage are still arriving in the area and during August a total of 24 ships of 263,750 tons d.w. were ordered. A pleasing feature of the contracts was the trend to more orders for cargo ships, with contracts for seventeen vessels of this type, totalling 154,750 tons d.w., being announced. In the Tees area five tankers of 101,000 tons d.w. were ordered.

Repair yards are being kept fully employed and indications are that most yards will be busy for some months ahead. Still another contract for a conversion to oil firing has been arranged: John Readhead & Sons, Ltd., South Shields, will carry out the conversion of the *Beckenham*, owned by Watts, Watts & Co., Ltd. The same yard has also booked a contract for damage repairs to the *Irish Pine*. The two damaged halves of the tanker *Atlantic Duchess*, which broke its back last January at the end of her maiden voyage, have now been joined together by William Gray & Co., Ltd.

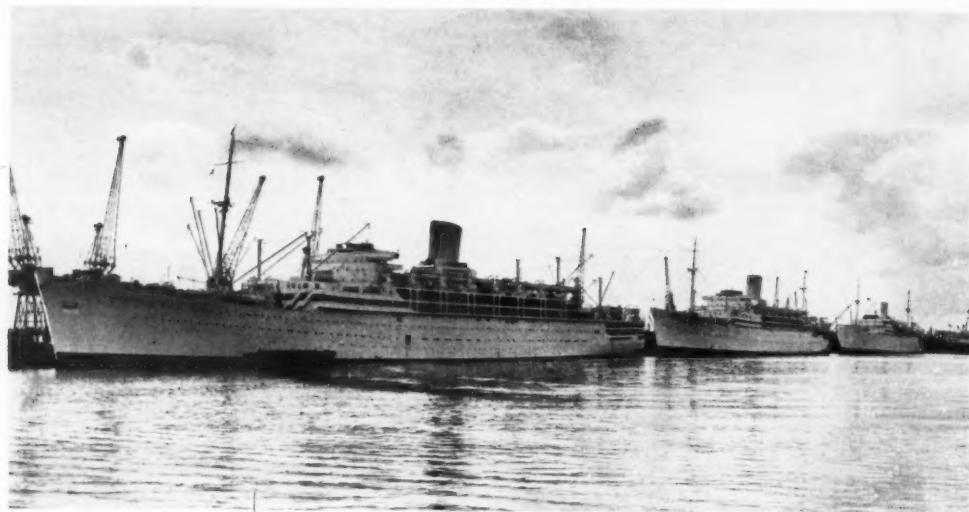
Installing the "Auris" Gas Turbine

FIRST MERCHANT SHIP TO BE FITTED WITH
NEW TYPE OF PROPULSION

THE first merchant ship in the world to be powered by a gas turbine, the motor tanker *Auris*, is now moored in the Tyne, where the new unit is being installed by her builders, R. & W. Hawthorn, Leslie & Co., Ltd. Built for the Anglo-Saxon Co., Ltd., in 1947, the *Auris* has since been operated as a normal tanker on the trade routes of the world, although allowance was made in the design of the vessel for the future installation of an experimental gas turbine unit.



The whole of the work is being carried out under the direction of Mr. John Lamb, head of the Shell marine research and development department, who designed the vessel as an experimental ship for testing equipment produced by his technicians for improved safety and crew comfort and more efficient cargo handling methods. The gas turbine alternator unit, built by the British Thomson-Houston Co., Ltd., is to replace one of the four diesel-electric alternator sets by which the *Auris* has been powered during the past three years. Use has been made of the large floating crane "Titan" in installing the new unit. The *Auris* is expected to undergo sea trials within the next month. Shown above is a view of the gas turbine on arrival at the St. Peter's Works of R. & W. Hawthorn, Leslie & Company, while the picture on the left shows the engine room with skylights removed revealing the gas turbine lowered into position.

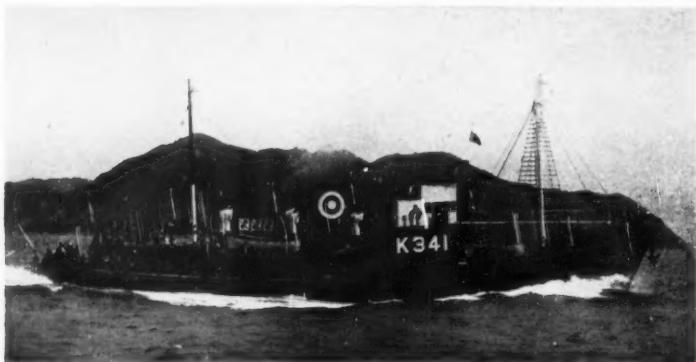


P. & O. Liners at Tilbury

Some 92,000 tons gross of shipping of the Peninsular & Oriental Steam Navigation Company were represented when the liners *Himalaya*, *Chusan*, *Strathmore* and *Ranchi* were recently berthed together at Tilbury. The first two vessels in the foreground, the *Himalaya*, 28,000 tons gross, since left for Australia, and the *Chusan*, 24,000 tons gross, have completed a series of summer cruises. Behind the *Chusan*, which sails for Bombay on September 18, can be seen the *Strathmore*, 23,000 tons gross, leaving tomorrow for Australia. The *Ranchi*, 17,000 tons gross, not in the photograph, is due to leave for Australia next week.

French Tug "Ursus"

The completion has taken place of the single-screw motor tug *Ursus*, built by the Chantiers et Ateliers de Bretagne for the Compagnie Generale Transatlantique. With a gross tonnage of 245, she has dimensions of 120 ft. 11 in. length o.a., 111 ft. 5 in. b.p., 26 ft. 7 in. breadth moulded and 13 ft. 8 in. depth. Her normal draught is 10 ft. 10 in. The *Ursus* is provided with two series of pumps, the first for fire service and the second for salvage operations. There are two pivoting water projectors served by a powerful pump, the capacity of which is 250 tons per hour with a head of 100 m. The main salvage pump has a discharge of 500 cu. m. per hour with a 6-m. suction. The *Ursus* is propelled by two M.A.N. single-acting four-stroke 650-h.p. diesel engines driving a single-screw through Vulkan coupling gear. Coupled to the engines are a 100-kW dynamo and a 100 kW alternator, there also being two 220-volts D.C. diesel generators of 50 kW. All auxiliaries are electrically operated.



Whale Catcher for Japan

Of 434 tons gross, the diesel-driven whale catcher *Kanan Maru No. 5* has been delivered to Nippon Suisan Kaisha, Ltd., by the Hitachi Shipbuilding & Engineering Co., Ltd., from the Mukaishima shipyard. The principal dimensions of the vessel are 47 m. (154.23 ft.) length b.p., 8.2 m. (26.9 ft.) breadth moulded and 4.4 m. (14.43 ft.) depth moulded, the load draught being 3.8 m. (12.46 ft.). A maximum speed of 15.54 knots is maintained by a 7TT 48 Type diesel engine of the shipbuilders' own manufacture. The engine develops 1,800 b.h.p.

NEW CONTRACTS

Yards in Great Britain and Northern Ireland

Shippers	No. of Ships	Type	Approximate Tonnages		Dimensions (ft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
			Gross	Deadweight						
London & Rochester Trading Co.	1	Thames lighter (to be named Gold)	—	220	89 x 20 x 9	5.5	Kelvin diesel	—	—	Wm. Weatherhead & Sons (on behalf of Fairmile Construction Co.) Blyth D.D.
Australian Govt.	2	Ore carriers	—	10,000 (each)	—	—	—	—	—	George Brown & Co. (Marine) Cook, Welton & Gemmell
John Kelly, Ltd.	1	Cargo coaster	—	800	—	10.5	Tr.-exp. steam	—	Aitchison, Blair	—
J. Marr & Son	1	Trawler	—	—	185 (long)	—	Steam oil-fired	—	—	—
J. Marr & Son	1	Trawler	280	—	123 (long)	11	Diesel	700	Mirrlees, Bickerton & Day	—
Boston Deep Sea F. & Ice Co.	2	Trawlers	500 (each)	—	155 (long)	—	Diesel	800 (each)	Mirrlees, Bickerton & Day Shipbuilders	Cook, Welton & Gemmell
Nicolas G. Nicolaou, Athens	1	Cargo*	—	10,750	—	—	Tr.-exp. steam, Bauer-Wach ex. turb.	—	—	John Readhead
S. African Ryds. & Harbour Administration	1	Tug	—	—	155 (long)	—	Steam	2,500	—	Wm. Simons
H. M. Wrangell & Co., Haugesund	1	Tanker	—	18,000	—	—	Diesel	—	—	Furness S.B.
Rolf Wigand, Bergen	2	Cargo	—	4,500 (each)	—	12-12.5	Tr.-exp. steam	—	N. E. Marine	John Crown
Commonwealth and Foreign Yards										
L. Smit & Co.'s Internationale Sleepdiens, Rotterdam	1	Deep-sea salvage tug (to be named Oostzee)	—	—	147.7 x 28.9 x 16.2	14	4-str. Smit-M.A.N. diesel	2,000	—	J. & K. Smit's Scheeps. N. V., Kinderdijk
French State Ryds.	1	Tanker	2,880	—	—	—	Parsons steam turbine	—	Shipbuilders	Forges et Chi de la Mediterranee, Gravelle

* Orders for three 10,000 tons d.w. cargo vessels for unnamed foreign owners were reported in THE SHIPPING WORLD of August 22, 1951.

LAUNCHES

Yards in Great Britain and Northern Ireland

Date	Shippers	Ship's Name and/or Yard No.	Type	Approximate Tonnages		Dimensions (ft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
				Gross	Deadweight						
Aug. 17	James W. Cook & Co.	Woodcock C.	Tank barge	77	—	82.5 x 14.5 x 7	—	Lister diesel	63	—	Richard Dunston, Thorne
Aug. 20	West Hartlepool S.N. Co.	Bentley Queen (683)	Drifter-trawler	114	—	84 x 21.5 x 9.75	—	Mirrlees diesel	207	—	Richard Dunston, Hesle
Aug. 23	Union Whaling Co.	Anders Arvesen (1455)	Whale catcher	640	—	—	—	Steam	—	—	A. & J. Inglis
Sept. 3	Mitchell & Rae	Anno (829)	Cargo coaster	250	300	133 o.a. and 120 b.p. x 24 x 9.5	—	Sin.-scr., 2-str. diesel	—	British Polar Engines	Hall, Russell

TRIAL TRIPS

Yards in Great Britain and Northern Ireland

Date	Shippers	Ship's Name and/or Yard No.	Type	Approximate Tonnages		Dimensions (ft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
				Gross	Deadweight						
—	Melbourne Harbour Trust	A. D. Mackenzie (1119)	Bucket dredger	635	—	178 x 36 x 12.5	—	Non-propelled	—	—	Labnitz
—	British Tanker Co.	British Lady (1211)	Tanker	6,100	8,400	423 o.a. and 400 b.p. x 56 x 30.08	11	3-cyl. Daxford diesel	2,500	R. & W. Hawthorn, Leslie	Smith's Dock
—	A/S Jacob Kjøde	Hornblower (468)	Tanker	11,000	16,000	500 b.p. x 67 x 38.5	13	Sin.-scr., 5-cyl., 2-str. diesel	—	John G. Kincaid	Chas. Connell
—	Unitas, Inc., Panama	Kipawa (656)	Tanker	13,070	19,000	547.4 x 72.3 x 41.1	—	Sin.-scr., 5-cyl., 2-str. Daxford diesel	—	Shipbuilders	John Brown
—	Crown Agents for Colonies	Nyoti (1430)	Harbour tug	359	—	122.4 x 30.1 x 13.8	—	Tw.-scr. steam	—	Aitchison, Blair	A. & J. Inglis
Aug. 25	Argentine Govt.	Presidente Peron (1205)	Tanker	12,750	18,000	565.75 o.a. and 530 b.p. x 71 x 39	—	Sin.-scr., dble.-red. geared turbine	6,000	Shipbuilders	Cammell Laird
Sept. 3	Straits S.S. Co., Singapore	Kimanis (481)	Pass. and cargo	3,100	—	312 o.a. and 285 b.p. x 51 x 22	13.75	Tw.-scr., 8-cyl., 2-str. diesel	2,560	British Polar Engines	Caledon S.B.
Sept. 5 and 6	British India S.N. Co.	Chakidina (1880)	Cargo	7,150	—	455 b.p. x 62.5 x 40.75	—	Sin.-scr., 6-cyl. Daxford diesel	6,800	Shipbuilders	Swan, Hunter & Wigham Richardson, Walker
Sept. 6	South Eastern Gas Board	Sydenham (1345)	"Flatiron" collier	1,871	2,875	265.83 b.p. x 39.5 x 18.5	—	Sin.-scr., 8-cyl. diesel	1,150	British Polar Engines	Burntisland S.B.
Sept. 7	British Tanker Co.	Adventure (1994)	Tanker	18,500	28,000	643 o.a. and 610 b.p. x 81 x 44.5	15	Sin.-scr., dble.-red. geared Parsons' turbines	13,750	Shipbuilders	Vickers-Armstrongs, Barrow
Commonwealth and Foreign Yards											
—	Soc. Geral de Com. Ind. e Transportes	Ana Mafalda	—	3,230	—	315 x 45.25 x 27	14	Sin.-scr., two 7-cyl., 2-str. geared diesels	2,240	A.B. Atlas-Diesel, Stockholm	Cia. Uniao Fabril, Lisbon
—	H. W. Christophersen	Annelis Christophersen	Cargo	998	1,600	237 x 34 x 17.1	11.3	6-cyl., 4-str. diesel	830	Waggon- u. Maschb. A.G., Hamburg	Norden-werk, Hamburg
—	H. M. Gehreckens	Atlanta	Cargo	—	1,800	246.08 x 37.75	12.5	4-str. Wurm diesel	1,500	—	Nobiskrug Werft
—	Mitsui Shipping Co.	Azumasan Maru	—	6,993	—	419.75 x 59 x 36.1	—	Sin.-scr., 8-cyl., 2-str. diesel	4,200	Shipbuilders	Mitsui, S.B. & E. Co., Yamano
—	Cia. Arrendataria del Monopolio de Petroleos	Campanito	Tanker	8,452	10,900	487.08 o.a. x 62 x 34.3	—	Tw.-scr., 6-cyl., 4-str. B. & W. diesel	3,800	La Maquinista Terrestre y Maritima	Euskalduna, Bilbao



MR. JOHN LAMB, head of the marine research and development department of the Shell Group, is responsible for the work at present being undertaken in installing a gas turbine unit in the Anglo-Saxon tanker *Auris*. Mr. Lamb went to sea in 1911. After nearly 14 years at sea, he was appointed superintendent engineer by Anglo-Saxon. In 1938 he became a director of F. J. Trewent & Proctor, Ltd., but in 1940 returned to the company as chief marine superintendent.



MR. J. M. BROCKLEBANK, a newly-appointed director of The Cunard Steamship Co., Ltd., and of Cunard White Star, Ltd., is also a director of Thos. & Jno. Brocklebank, Ltd., Martins Bank, Ltd., and the Reliance Marine Insurance Company. Mr. Brocklebank, a well-known cricketer, is a son of the late Sir Aubrey Brocklebank and a brother of Sir Thomas Brocklebank. In 1937 he went to Canada with the first official M.C.C. team to visit the Dominion.

MARITIME NEWS IN BRIEF

From Correspondents at Home and Overseas

RATE increases ranging from 10 to 20 per cent will be introduced during October by five shipping conferences in North and South Atlantic routes, affecting some 40 shipping lines. No increases on routes to British ports have yet been announced, but the North Atlantic U.K. Freight Conference state that similar freight increases are being considered. United States shipowners say that the new rates have been forced by rising costs, particularly the recent wage increases negotiated by U.S. seamen.

It is announced that Sir Arthur P. M. Fleming, who recently relinquished his position as director of research and education of Metropolitan-Vickers Electrical Co., Ltd., although retaining his seat on the board of directors, has been appointed director of research and education with A.E.I., Ltd. Sir Arthur has for some years been chairman of the A.E.I. research committee.

Mr. J. N. BURRELL, a director of the Tyne-Tees Steam Shipping Co., Ltd., and other companies, has been appointed a member of the Tyne Improvement Commission, as a representative of the shipowners, in succession to Mr. H. Armstrong, who has resigned.

The Marconi International Marine Communication Co., Ltd., announce the retirement of Mr. T. H. F. Willoughby, chief accountant of the company, and Mr. S. Stansbridge, manager of the traffic division.

Mr. G. F. JOHNSON has been appointed a director of Howard Tenens, Ltd., and will be principally concerned with the company's chartering interests.

SIX years' work for the yard of the Furness Shipbuilding Co., Ltd., is assured by the recent orders received by the company. During the past twelve months the company has obtained orders for 20 vessels totalling 402,000 tons deadweight. The yard now has more than 30 ships to build, including a 32,000 tons ore carrier for American owners which will be the largest vessel yet built on the Tees. The company recently booked an order for three 25,000 tons d.w. tankers, followed a week later by further contracts for five vessels of the same tonnage, four for Canadian owners and the other for a Jamaican concern.

It was wrongly reported in last week's SHIPPING WORLD that the launch to take place at the yard of William Doxford & Sons, Ltd., on September 19 is the first of four 12,000-ton tankers for the Overseas Tankship Corporation of New York. Although the order for the vessels was placed by this company, the contract was assigned to the Overseas Tankship (U.K.), Ltd., two days after the incorporation of the company on August 2. The Overseas Tankship (U.K.), Ltd., has five other tankers on order on the North East Coast, three at R. & W. Hawthorn, Leslie & Co., Ltd., and two at the Furness Shipbuilding Co., Ltd.

SHIPYARDS and marine engineering works in the North-East area, together with other industrial concerns, are being asked to arrange plans for cutting down electricity consumption between the hours of 8 a.m. and noon and 4 p.m. and 5.30 p.m. It is recommended that staggered hours should be introduced in engineering works during the winter. The area's electricity capacity is not expected to be able to meet the demand until 1955.

THE annual report of the Seamen's Club, of Copenhagen, for 1950 states that during the year the club was visited by 25,236 guests, making the total number since the club was established in 1940 almost a quarter of a million. In 1950 a special sum was placed at the disposal of the club for specific arrangements enabling the club to invite foreign seamen to festivities or excursions.

A TELEVISION set has been installed by E. K. Cole, Ltd., in both the *Britannia* and the *Suecia* of the Swedish Lloyd Line. These vessels have been making regular trips between Gothenburg and London during the summer months, many of their passengers using the ships as "floating hotels" for their stay in London.

AMARKED improvement occurred in the Tees shipping trade in July, revenue coming within £4,000 of the highest ever recorded. During June and July the number of ships cleared at Middlesbrough and Stockton was well below those for May, but the tonnage of vessels cleared in July showed a considerable improvement. The figures recorded during this month were the highest since November 1950, and the highest for the month of July since 1939.

THE series of lectures for port workers on port operations, which, as announced previously in THE SHIPPING WORLD, are to be held during the winter session at the Constantine College, Middlesbrough, will be given twice weekly. It is stated that already there has been a good response from the men. Mr. E. Halder, dock superintendent at Middlesbrough, will give weekly lectures on port workings and general organisation, and Mr. P. Collin, of the Tees Conservancy Commission, will lecture weekly on financial matters.

TIMBER imports totalling about 54,000 tons have now begun to arrive at the Hartlepool after a period of slackness which had caused some concern. The steamship *Ora*, with a cargo from Russia, is the first of 16 timber ships due with softwood imports. In addition, 21,000 tons of pit-props are due this month and the figures for October may be even higher.

MORE than 60 coal trimmers employed at Blyth Staiths, Northumberland, are continuing their ban on overtime which they imposed in July. The ban is unofficial and is a protest against the transference of coal trimmers from one port to another as occasion arises, which, it is claimed, prevents trimmers being promoted to trimming work.

TYNE PLYWOOD WORKS LIMITED

WILLINGTON QUAY
WALLSEND,
NORTHUMBERLAND

MANUFACTURERS OF PLYWOOD
of all Descriptions

Telegraphic Address
"OKOUME WALLSEND"

Telephones:
Wallsend 64044/6

THE
MERCANTILE
DRY DOCK CO LTD
JARROW-ON-TYNE

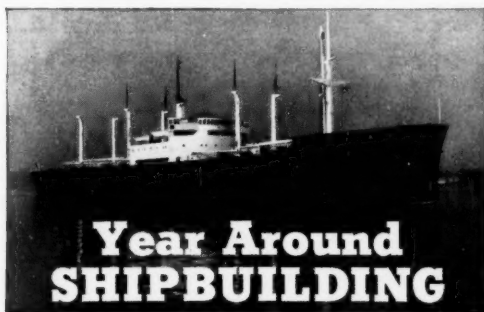
• • •

3 DRY DOCKS

SHIP REPAIRERS ENGINEERS
BOILERMAKERS

• • •

Tel. 4 LINES
67191 JARROW



PASSENGER, CARGO, OIL TANK VESSELS UP TO
18,000 TONS DEADWEIGHT.

MARINE DIESEL ENGINES, LICENCEES FOR VICKERS-
SKINNER UNAFLOW MARINE STEAM ENGINES.

Canadian representatives for—

CLARKE CHAPMAN WINCHES, WINDLASSES, ETC.
JOHN HASTIE STEERING GEAR.

Forty-five acres of shipbuilding facilities, complete
staff of experienced Naval Architects and Marine
Engineers.

CANADIAN
VICKERS
LIMITED
MONTREAL

Cable Address: VICKERS MONTREAL
On the shore of the mighty St. Lawrence

REPAIRS on the BRISTOL CHANNEL**MOUNTSTUART
DRY DOCKS****LIMITED.**

- CARDIFF** - Mountstuart Dry Docks
Channel and Bute Dry Docks
- NEWPORT** - Eastern Dry Docks
Tredegar Dry Dock
- BARRY** - The Barry Graving Dock and
Engineering Co., Ltd.
- AVONMOUTH** Works adjoin Public Dry
Docks.

**SPECIALLY EQUIPPED FOR
DIESEL ENGINE REPAIRS**

REPAIRING BERTHS & JETTIES**Head Office : Cardiff.**

Telegrams : "Mountstuart."

'Phone: 5103

EAGLE AVIATION LTD.

**draws the attention
of shipowners**

*to their fleet of four Avro York aircraft.
These aircraft are ideal for crew movements
also for the transport of ships' spares.
Maximum economy - Maximum speed.*

*Head Office:***29 CLARGES STREET, LONDON, W.1.***Tel: GROSvenor 6411 Cable: Speedlode Audley, London.***ADMIRALTY CHARTS**

**The LATEST EDITIONS of Charts,
Plans and Sailing Directions
published by the Hydrographic
Dept., can be obtained from**

J. D. POTTER, Admiralty Agent for Charts,
Publisher of Nautical Books,
and Bookseller.

145, MINORIES, LONDON, E.C.3. (Tel. : Royal 1369)
Large Stocks of Nautical and Technical Books of all
descriptions.

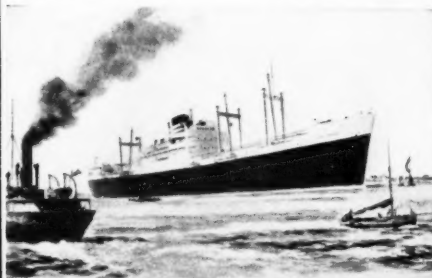
ESTABLISHED 1825

**BLUNDELL & CROMPTON
LIMITED**

**ENGINEERS : SHIP REPAIRERS
COPPERSMITHS : FOUNDERS Etc.**

Telephone
East 3838 (3 lines) & 1408

Telegrams :
Blundell, 'Phone, London



**Specialists in
URGENT HULL AND ENGINE REPAIRS**

**Sole Manufacturers :
BLUNDELL 'ATMOS' VALVES
CROMPTON ASH HOISTS**

WEST INDIA DOCK ROAD, LONDON, E.14Branch Works : **TILBURY DOCKS, ESSEX.** Telephone : Tilbury 33**FIRE!****WHERE'S YOUR****NU-SWIFT?**

**The World's Fastest Fire Extinguishers
- for every Fire Risk**

Pressure-operated by sealed CO₂ Charges

NU-SWIFT LTD • ELLAND • YORKS

*In Every Ship of the Royal Navy***SHIP REPAIRERS**

**MARINE
ENGINEERS**

**IRON and BRASS
FOUNDERS**

J. GORDON ALISON & CO., LTD

Telephone :
52 BIRKENHEAD
Wires :
"GORDON BIRKENHEAD"

**Dock Engine Works,
BIRKENHEAD**

ELLERMAN LINES

World-Wide Services

Linking

U.K. CANADA U.S.A.

with

**SOUTH & EAST AFRICA
PORTUGAL, MEDITERRANEAN,
EGYPT, LEVANT & BLACK SEA,
RED SEA & PERSIAN GULF
INDIA & PAKISTAN.
CEYLON & BURMA
MALAYA, PHILIPPINES, CHINA & JAPAN
AUSTRALIA & NEW ZEALAND.**

*Hall Line, Ellerman & Bucknall Line,
City Line, Ellerman Line
Papayanni Line,
Westcott &
Laurance Line,*

Head Office
104-7, LEADENHALL STREET,
LONDON, E.C.3
LIVERPOOL—Tower Buildings,
Water Street
GLASGOW—75, Bothwell St., C.2



World-Wide Services

HOULDER BROTHERS & CO. LTD.

Shipowners, Insurance Brokers, Passenger &
General Forwarding Agents (Sea and Air)

REGULAR FAST SERVICES to**RIVER PLATE**

From Liverpool, London, Bristol Channel & Antwerp
and to **SOUTH AFRICA**

FREIGHT ENGAGEMENTS made and goods insured and forwarded
By Sea and Air
TO ALL PARTS OF THE WORLD

Head Office: 53, LEADENHALL STREET, LONDON, E.C.3

Branch Offices at Liverpool, Glasgow, Newport (Mon.), Bristol, Swansea,
Manchester, Hull, Southampton, Birmingham, Sheffield, Bradford,
Hanley, Dundee, Cape Town and Sydney (N.S.W.).

Representatives in Argentina and Uruguay: Soc. Anon Houlder Brothers
& Co. (Argentina), Ltd., Buenos Aires, Rosario, La Plata and
Montevideo.

Brazil: Houlder Brothers & Co., Brazil, Ltd., Rio de Janeiro and Santos.

WILSON LINE, HULL

"Grams" WILSONS, HULL"
Phone No. 16180 (20 lines)

REGULAR SERVICES

From Hull, London, Liverpool, Manchester, Middlesbrough, Newcastle,
Aberdeen, Swansea, Newport, Antwerp, Dunkirk, etc.; to and from
Norway, Sweden, Denmark, Poland, Baltic States, Portugal, Mediterranean
Adriatic & Levant Ports, Egypt, India, Pakistan, Canada & United States.

PASSENGERS Passenger Services to Norway, Sweden, Denmark,
Poland, Italy, United States and Canada, etc.

MARINE INSURANCE Insurances arranged on Cargo by
our own and other steamers to and
from all ports at current rates of premium.
Lighter Owners Forwarding Agents, Warehouse Keepers and Sworn
Weighers Bunkers supplied.

For Rates of Freight, Fares, Insurance, Forwarding, etc., apply to—

ELLERMAN'S WILSON LINE, Ltd., HULL
or Branch Offices at Leeds, Sheffield, Manchester, Birmingham, Bradford
and Grimsby; or London Agents—THE UNITED SHIPPING CO.
LTD., 108, Fenchurch St., London, E.C.3. London Brokers for Indian and
Pakistan Trade—GELLATLY, HANKEY & CO., Ltd., Dixon House,
1, Lloyd's Avenue, London, E.C.3., or 62, Pall Mall, S.W.1.

FURNESS LINES

FURNESS LINE

London to Philadelphia and New York.

FURNESS WEST INDIES LINE

New York to U.S. Virgin Islands, British & French
West Indies, Venezuela and Trinidad.

Newfoundland and Canada to U.S. Virgin Islands,
British & French West Indies, Venezuela & Trinidad.

FURNESS RED CROSS LINE

New York to Saint John, N.B./Halifax,
N.S./ St. John's and Corner Brook, N.F.

FURNESS-WARREN LINE

Liverpool to St. John's, Newfoundland, Halifax,
N.S., and Boston.

FURNESS PACIFIC SERVICE

Manchester to Los Angeles, San Francisco, Victoria
and Vancouver, B.C., via Panama Canal.

Loading Brokers:—Manchester Liners Ltd. Manchester 2.

FURNESS BERMUDA LINE

New York to Bermuda.

JOHNSTON WARREN LINE

Antwerp, Hamburg and Liverpool to Piraeus, Volo,
Thessaloniki, Izmir. Haydar Pasha, Istanbul, Black
Sea, Roumanian and Danubian Ports.

For further information apply:—

FURNESS WITBY & CO., LTD.,

Furness House, Leadenhall Street, London, E.C.3.
Also at LIVERPOOL, GLASGOW, LEITH,
MIDDLESBROUGH AND NEWCASTLE.

PRINCE LINE

CANADA & U.S.A. — BRAZIL — RIVER PLATE — BRAZIL
TRINIDAD — U.S.A. & CANADA

U.S.A. — SOUTH & EAST AFRICA — U.S.A.

U.S.A. — FAR EAST — E. CANADA — U.S.A.

U.K. — MEDITERRANEAN — U.K.

ARGENTINA & URUGUAY — U.K.

For further information apply—

PRINCE LINE LTD. :: 56, Leadenhall St., E.C.3

New Zealand Line

• Passenger and Cargo Services via Panama

Particulars from:— J. B. WESTRAY & CO. LTD.
138 LEADENHALL ST., E.C.3 • Tel. (Avenue 5220)

THE NEW ZEALAND SHIPPING Co. Ltd.

PORT LINE

FREIGHT AND PASSENGERS

Regular Sailings
LONDON, LIVERPOOL, NEW YORK & CANADA
to
AUSTRALIA & NEW ZEALAND

PORT LINE LTD.

CUNARD HOUSE, 88, Leadenhall Street, London, E.C.3

'Phone: Avenue 1270.

Telegrams: "Portships Fen, London"

PALM LINE LIMITED

Palm Line operates a frequent and reliable service
of modern cargo liners between West Africa,
the Continent and Great Britain

CARGO LINERS LINKING

WEST AFRICA & EUROPE



ENSLIEVE HOUSE, BLACKBRIERS, LONDON, E.C.4
AFRICA HOUSE, MERSEY ST., LIVERPOOL 1

BRITISH & CONTINENTAL STEAMSHIP CO., LTD.

AMSTERDAM. ROTTERDAM. DUNKIRK. ANTWERP. GHENT
& TERNEUZEN from and to LIVERPOOL & MANCHESTER
ANTWERP & GHENT from and to GLASGOW
GHENT from and to BELFAST

AGENTS

LIVERPOOL and MANCHESTER:

For Rotterdam, Amsterdam and Dunkirk Steamers: Wilson, Son & Co.

For Antwerp, Ghent and Terneuzen Steamers: J. T. Fletcher & Co.

GARSTON: Ed. W. Turner & Son.

BARROW: James Fisher & Sons, Ltd.

GLASGOW: Clyde Shipping Co., Ltd.

BELFAST: O. Heyn & Sons Ltd.; James Little & Co. (Belfast) Ltd.

ANTWERP, GHENT, TERNEUZEN: John P. Best & Co., S.A.

ROTTERDAM: P. A. Van Es & Co; Phs. Van Ommeren (Rotterdam) N.V.

AMSTERDAM: Van Es & Van Ommeren

DUNKIRK: L. A. De Raecker.

LONDON: Phs. Van Ommeren (London) Ltd., Baltic House, 27 Leadenhall

Street, E.C.3

PARIS: Phs. Van Ommeren (France) S.A., 11, Rue Tronchet, 8e

ORIENT LINE to AUSTRALIA



FOR PARTICULARS: 14 COCKSPUR ST., LONDON, S.W.1 Tel. TRA 2141
APPLY: 7 BISHOPSGATE, LONDON, E.C.3 Tel. MAN 3416
ORIENT LINE 9 KINGSWAY, W.C.2 Tel. TEM 2159 or Agents

P&O and B.I.

- From United Kingdom and Continental ports to EGYPT, ADEN, RED SEA PORTS, INDIA, PAKISTAN, CEYLON, E. & S. AFRICA, MALAYA, CHINA, JAPAN, AUSTRALIA, etc.

For details of services, fares, etc., apply—

P. & O., 122, Leadenhall St., E.C.3, • 14, Cockspur St. S.W.1
• 9, Kingsway, W.C.2 •

B. I. (Agents: Gray Dawes & Co.), 122, Leadenhall St., E.C.3

BIBBY LINE

UNITED KINGDOM, CONTINENT,
MARSEILLES, EGYPT, SUDAN, CEYLON
AND BURMA

All enquiries to:—

BIBBY BROTHERS & CO., Martins Bank Building, Water
Street, LIVERPOOL, 2.

UNITED STATES LINES

Regular Frequent Service to

NEW YORK

BOSTON, PHILADELPHIA, BALTIMORE & HAMPTON ROADS
FROM

LONDON, SOUTHAMPTON, LIVERPOOL,
GLASGOW and BELFAST

For sailings and all information apply

LONDON: 38, Leadenhall St., E.C.3 (Royal 6677)

LIVERPOOL: Wellington Buildings, 7, The Strand (Central

1931 6)

GLASGOW: 179, West George St., C.2

BELFAST: 67/69 HIGH STREET (Belfast 25451)

Or any authorised Agents

UNION-CASTLE LINE

to
South and East Africa

WEEKLY MAIL SERVICE
from **SOUTHAMPTON**
also Intermediate & East African
Sailings from **LONDON**

Head Office:
3 FENCHURCH ST. LONDON, EC3
MAN 2550 (Passenger MAN 9104)
West End Passenger Agency:
125 Pall Mall, SW1 WHI 1911



ROYAL MAIL LINES

to **SOUTH AMERICA**
BRAZIL • URUGUAY
ARGENTINA

WEST INDIES
SPANISH MAIN
CENTRAL AMERICA
NORTH PACIFIC COAST



ROYAL MAIL LINES, LTD.

London: Royal Mail House, Leadenhall Street, E.C.3. America House, Cocksfoot
Street, S.W.1.
Liverpool: The P.S.N. Co., Pacific Building, James Street. (2)

P. S. N. C.

LIVERPOOL, BERMUDA, BAHAMAS, CUBA,
JAMAICA, PANAMA CANAL, WEST COAST OF
SOUTH AMERICA.

Also via Bahia Blanca & Punta Arenas

THE PACIFIC STEAM NAVIGATION CO.

Pacific Building, James St., Liverpool, 2
London Agents: Royal Mail Lines, Leadenhall St. E.C.3

Freight: McGregor, Gow & Holland, Ltd.
16, St. Helen's Place, London E.C.3

CARGO FROM

Hamburg, Bremen, London & East Coast U.K. Ports
TO

U.S.A. GULF PORTS

BROWN, JENKINSON & CO., LTD., 113 Fenchurch Street, E.C.3
WESTBOUND LOADING BROKERS

Galveston, Houston, New Orleans & Mobile
to East Coast U.K. & North Continent

by **ROPNER LINE**

SIR R. ROPNER & CO. (MANAGEMENT) LTD.
Coniscliffe Road, Darlington. Telephone 2811.
SIR R. ROPNER & CO. (LONDON) LTD.
22 St. Mary Axe, London, E.C.3.
Telephone: AVE. 2153

STRACHAN SHIPPING CO.—New Orleans and all U.S. Gulf Ports.

THE BANK LINE

OPERATING THE FOLLOWING SERVICES

AMERICAN AND INDIAN LINE—Calcutta, Chittagong, Rangoon and
Colombo to Halifax, Boston, New York, Philadelphia, Baltimore
and Norfolk (Va.).

AMERICAN AND INDIAN BRANCH LINE SERVICE—Rangoon,
Chittagong, Madras, Madras Coast, Colombo and Malabar Coast.
(filling up if necessary at Aden and Port Sudan) to Halifax, Boston
New York, Philadelphia, Baltimore and Norfolk (Va.).

BOMBAY AMERICAN LINE—Bombay to New York and Philadelphia.

AMERICAN AND ORIENTAL LINE—U.S. Atlantic and Pacific Coast
ports to Philippines, Hong Kong, Shanghai, Japan, Indonesia and
Malaya, returning to Canada and U.S.A. via Suez Canal.

CALCUTTA TO RIVER PLATE PORTS—Chittagong, Calcutta and
Other Indian Ports. Colombo and Malabar Coast to Brazil
Montevideo, Buenos Aires, Rosario and Bahia Blanca.

INDIAN CHILEAN LINE—Calcutta, Chittagong, Rangoon, Singapore
and Indonesia to West Coast of South American ports.
Calling at Colombo and Cochin when opportunity offers.

INDIAN AFRICAN LINE—Carrying passengers and cargo from
INDIA-NATAL LINE—Rangoon, Chittagong, Calcutta, other
Indian ports and Colombo to East and South African ports and
vice versa. (Vessels of the India-Natal Line also call at
Madagascar when opportunity offers.)

ORIENTAL AFRICAN LINE—Carrying passengers and cargo from
Japan, Shanghai, Hong Kong, Philippines, Borneo, Saigon, Bangkok
and Malaya to Mauritius Reunion East and South African ports
and vice versa.

U.S. GULF to AUSTRALASIA—Regular sailings from all U.S. Gulf ports
to all ports in Australia and New Zealand. Calling at Trinidad en
route when sufficient inducement offers.

U.S. GULF to SOUTH AFRICA—U.S. Gulf ports to South and East
African ports.

PERSIAN GULF—General Merchants, Export, Import and Ship Agents.

For Freight and Particulars apply to—

ANDREW WEIR

SHIPPING & TRADING CO., LTD.
19-21, BURY STREET, LONDON E.C.3.

ANGLO BALTIC LINES

U.K. PORTS

to

GDYNIA/GDANSK & FINNISH PORTS

also

KLAIPEDA (Memel) LIEPAJA (Liban)
RIGA and TALLINN

when conditions permit, and sufficient inducement offers.

For further particulars apply to—

UNITED BALTIC CORPORATION, LIMITED,
158, Fenchurch Street, London, E.C.3

Telegrams "Orienteako," London
Telephone No.: Mansion House 3311 (3 lines)

MAC ANDREW LINE

SPAIN AND MOROCCO

Regular Services from LONDON, LIVERPOOL and Principal U.K. Ports

Express Service by fast Motorships from
LONDON and LIVERPOOL to BARCELONA

HALL'S LINE To LISBON and GIBRALTAR

Express Service by fast Motorships from LONDON to GIBRALTAR

GLYNN LINE To WEST ITALY and SICILY

For Freight and Passage apply to—

MACANDREWS & CO., LTD.,
Plantation House, Mincing Lane, London, E.C.3.

Telephone: MANSION HOUSE 1543

Cunard Building, Water St., Liverpool, 3 Tel: CENTRAL 3922
BRANCH HOUSES at *Barcelona, *Madrid, *Tarragona
*Castellon, *Burriana, *Valencia, *Gandia, *Denia
*Carthage, *Almeria, *Malaga, *Seville and Bilbao

Branches with * act as Lloyd's Agents.

Agencies in all other principal ports

Australia

Passenger & Cargo Service
One Class (Tourist)

ABERDEEN & COMMONWEALTH LINE

88, LEADENHALL STREET, LONDON, E.C.3.

Telephone AVenue 4232

GELLATLY, HANKEY & CO. LTD.

REGULAR SERVICES FROM

United Kingdom to Egypt, Red Sea, India,
Ceylon, Africa, Straits Settlements and
Far East

For Freight, Passage, Forwarding and Insurance, apply to:

GELLATLY, HANKEY & CO., LTD.,
Dixon House, 1, Lloyd's Avenue, LONDON, E.C.3
or 23, Pall Mall, S.W.1, Manchester, Liverpool, Glasgow



BROCKLEBANK & WELL LINES

GLASGOW and LIVERPOOL to CALCUTTA

For Rates of Freight and further particulars, apply to Alex. Howden and Co. Ltd. 107/112, Leadenhall Street, London, E.C.3; P. Henderson & Co., 95, Bothwell Street, Glasgow; The Cunard Steam-Ship Co. Ltd., Bradford, Birmingham; Bigland, Hogg & Co. Ltd., Zetland Bldgs., Middlesbrough; THOS. & JNO. BROCKLEBANK, Ltd., Cunard Building, Liverpool. And Manchester Dundee and Sheffield.

MIDDLESBROUGH and LONDON to COLOMBO MADRAS and CALCUTTA

For Rates of Freight and further particulars, apply to Gosman & Smith, Ltd., 96/98, Leadenhall Street, E.C.3; Bigland Hogg & Co. Ltd., Middlesbrough; of the Owners THOS. & JNO BROCKLEBANK LTD. LIVERPOOL.

BLUE STAR LINE

EXPRESS LINER SERVICES

WEST INDIES & SPANISH MAIN
SOUTH AFRICA, AUSTRALIA,
BRAZIL & ARGENTINA

or SAILINGS, Freight, Insurance and Passages, apply to:-

BLUE STAR LINE LTD., 31-33, LIME ST., E.C.3
Manchester, Birmingham.

Liverpool: Lampart & Holt Line Ltd. Glasgow: J. S. Nowery & Co

Chief Passenger Office

No. 3, Lower Regent Street, London, S.W.1.

FOR SALE

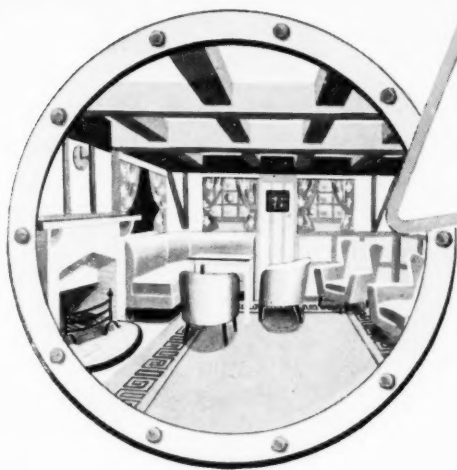
AVAILABLE FROM STOCK

250v and 410v D.C. Electric Dredge Fans
250v and 410v D.C. Electric Exhaust Fans
250v and 410v D.C. Electric Blowers
250v and 410v D.C. Rotary Converters
250v and 410v D.C. Refrigerator Motors
250v and 410v D.C. 3/4 H.P. T.E. 2500 c.p.m. 410 Motors
250v and 410v D.C. Electrical Generators
250v and 410v D.C. Ammeters
250v and 410v D.C. Voltmeters
also 110v D.C. Geared Motors.
THE UNIVERSAL ELECTRICAL CO., LTD.,
217-221, City Rd., London, E.C.1.

UNBERTHED passenger vessel having following particulars for sale:
Built 5-1949. Dimensions 150 ft. by 29 ft. by 10.25 ft. to main deck and 17.75 ft. to shade deck, gross tonnage 200, net tonnage 200, class Lloyd's 100. At plus, deadweight 241 tons on 8 ft. draft, hold capacity 15,760 cu. ft. single screw, triple expansion reciprocating engine, 485 I.H.P., speed 9.10 knots on 12.13 tons Indian coal, cabin passengers 10, deck passengers 421 under Class VII of Indian Merchant Shipping Lifting Appliances Rules, with class maintained, delivery Calcutta, October 1951. Price £155,000 payable in Indian currency or equivalent sterling. Reply Box No. 214, The Shipping World Ltd., 1, Abchurch Lane, London, E.C.4.

INDEX TO ADVERTISERS IN THIS ISSUE

	Page		Page		Page
Aberdeen & Commonwealth Line	A20	Cory, Wm. & Son, Ltd.	A11	Nu-Swift, Ltd.	A16
Alison, J. Gordon & Co., Ltd.	A16	Crewsair, Ltd.	A14	Orient Line	A18
Anderson, Green & Co., Ltd.	A18	Crossley Bros., Ltd.	A4	Pacific Steam Navigation Co.	A19
Anglo-Baltic Lines	A19	Dunlop Rubber Co., Ltd. (Dunlopillo Division)	A8	Palm Line, Ltd.	A18
Anglo-Iranian Oil Co., Ltd.	A11	Eagle Aviation, Ltd.	A16	Pan American World Airways	A6
Appleby Frodingham Steel Company	A5	Ellerman Lines	A17	P. & O. and B. I. Companies	A18
Automatic Coil Winder & Electrical Equipment Co., Ltd.	A21	Ellerman's Wilson Line, Ltd.	A17	Port Line, Ltd.	A18
Bank Line	A19	Furness Withy & Co., Ltd.	A17	Potter, J. D.	A16
Bibby Brothers & Co., Ltd.	A18	Gellatly, Hankey & Co., Ltd.	A20	Prince Line, Ltd.	A17
Blue Star Line, Ltd.	A20	Grayson, Rollo & Clover Docks, Ltd.	Back Cover	Ropner, Sir R. & Co. (Management) Ltd.	A19
Blundell & Crompton, Ltd.	A16	Houlder Brothers & Co., Ltd.	A17	Royal Mail Lines, Ltd.	A19
Bristol Aeroplane Co., Ltd.	A7	International Paints, Ltd.	A21	Sabena (Belgian Airlines)	A6
British & Continental Steamship Co., Ltd.	A18	Lister, R. A. (Marine Sales), Ltd.	A10	Scottish Non-Ferrous Tube Industries, Ltd.	A3
British European Airways	A14	MacAndrews & Co., Ltd.	A19	Shell Petroleum Co., Ltd.	A3
British Insulated Callender's Cables, Ltd.	Front Cover	Mercantile Dry Docks Co., Ltd.	A15	Thornycroft, John I. & Co., Ltd.	A4
British Overseas Airways Corporation	A12	Mersey Docks & Harbour Board	A21	Tyne Plywood Works, Ltd.	A15
British Thomson-Houston Co., Ltd.	A20	Mount Stuart Dry Docks, Ltd.	A16	Union-Castle Mail Steamship Co., Ltd.	A19
Brocklebank, Thos. & Jno., Ltd.	A14	New Zealand Shipping Co., Ltd.	A18	United Baltic Corporation	A19
Burness, James, & Sons, Ltd.	A14			United States Lines	A18
Campbell & Isherwood, Ltd.	A13			United Steel Companies, Ltd.	A5
Canadian-Vickers, Ltd.	A15			Weir, Andrew, Shipping & Trading Co., Ltd.	A19
Caston Barber & Co., Ltd.	A2			Westminster Dredging Co., Ltd.	A2
Cayzer Irvine & Co., Ltd.	A20				
Clan Line	A20				



AT HOME ON THE SEAS

Lounges and cabins painted in pleasant colours make people at home in no time. "International" interior paints are specially suited to marine requirements and maintain their freshness under all climatic conditions.

Always look into "International" paints before deciding on interior schemes.

"INTERNATIONAL"—THE GREATEST NAME IN MARINE PAINTS



International Paints Ltd

GROSVENOR GARDENS HOUSE, LONDON, S.W.1.

Telephone: VICTORIA 3161 (10 lines)

Also at: Cardiff, Liverpool, Newcastle, Southampton, West Hartlepool, Hull and in all the world's principal ports.

For HEAVY DUTY

The Heavy Duty AvoMeter is a portable multi-range A.C. D.C. moving coil meter of compact proportions and of specially robust construction to withstand the rough usage of outdoor work. It provides 18 ranges of direct readings on a 3½-inch scale, range selection being by means of a single rotary switch. An automatic cut-out provides protection against damage from inadvertent electrical overload, after which the meter can be rendered ready for use again by a small control on the panel.



VOLTAGE A.C. D.C.
10, 25, 250, 1,000 volts.
CURRENT A.C. D.C.
10 mA, 100 mA, 1 amp, 10 amps.
RESISTANCE
0-500 ohms (Midscale 12.5 ohms).
0-50,000 ohms (Midscale 1,250 ohms).
SENSITIVITY
D.C. voltage ranges: 1,000 ohms per volt. 10-volt A.C. range: 200 ohms per volt. Other A.C. voltage ranges: 500 ohms per volt.
ACCURACY
On D.C. 1 per cent. of full scale value. On A.C. to B.S. first grade.

£13 : 13 : 0
(Leather Case extra)


Size: 7½ × 5½ × 4 inches
Weight: 5½ lbs. approx.

Various accessories are available for extending the above ranges.

Details on application to the Sole Proprietors and Manufacturers:—

THE AUTOMATIC COIL WINDER & ELECTRICAL EQUIPMENT CO., LTD.
Winder House, Douglas Street, London, S.W.1. Phones: VICTORIA 3404-9

H.D.5



The PORT of LIVERPOOL

*
ROAD, RAIL and CANAL connections with
LANCASHIRE, YORKSHIRE and the MID-
LANDS.
SHIPPING SERVICES to all parts of the
WORLD.

Enquiries to:—
R. J. HODGES, General Manager & Secretary
MERSEY DOCKS & HARBOUR BOARD
DOCK OFFICE - - - - - LIVERPOOL 3
Tel.: CENTRAL 6010 - - - - - Grams: "Neptune, Liverpool"

or the Board's Traffic Representatives
LONDON: 44/46, Leadenhall St., E.C.3. Tel.: ROYAL 7148
BIRMINGHAM: 95, New Street. Tel.: MIDLAND 2376
BRADFORD: Broadway Hacc., Bank St. Tel.: BRADFORD 25684



6 PRIVATE DOCKS
ALL ENTERED FROM RIVER

REPAIRS ON THE MERSEY
GRAYSON, ROLLO
& CLOVER DOCKS
LTD.

Head Office : Sandhills Lane, LIVERPOOL.

Works at—North & South Docks Liverpool, Garston and Birkenhead.